



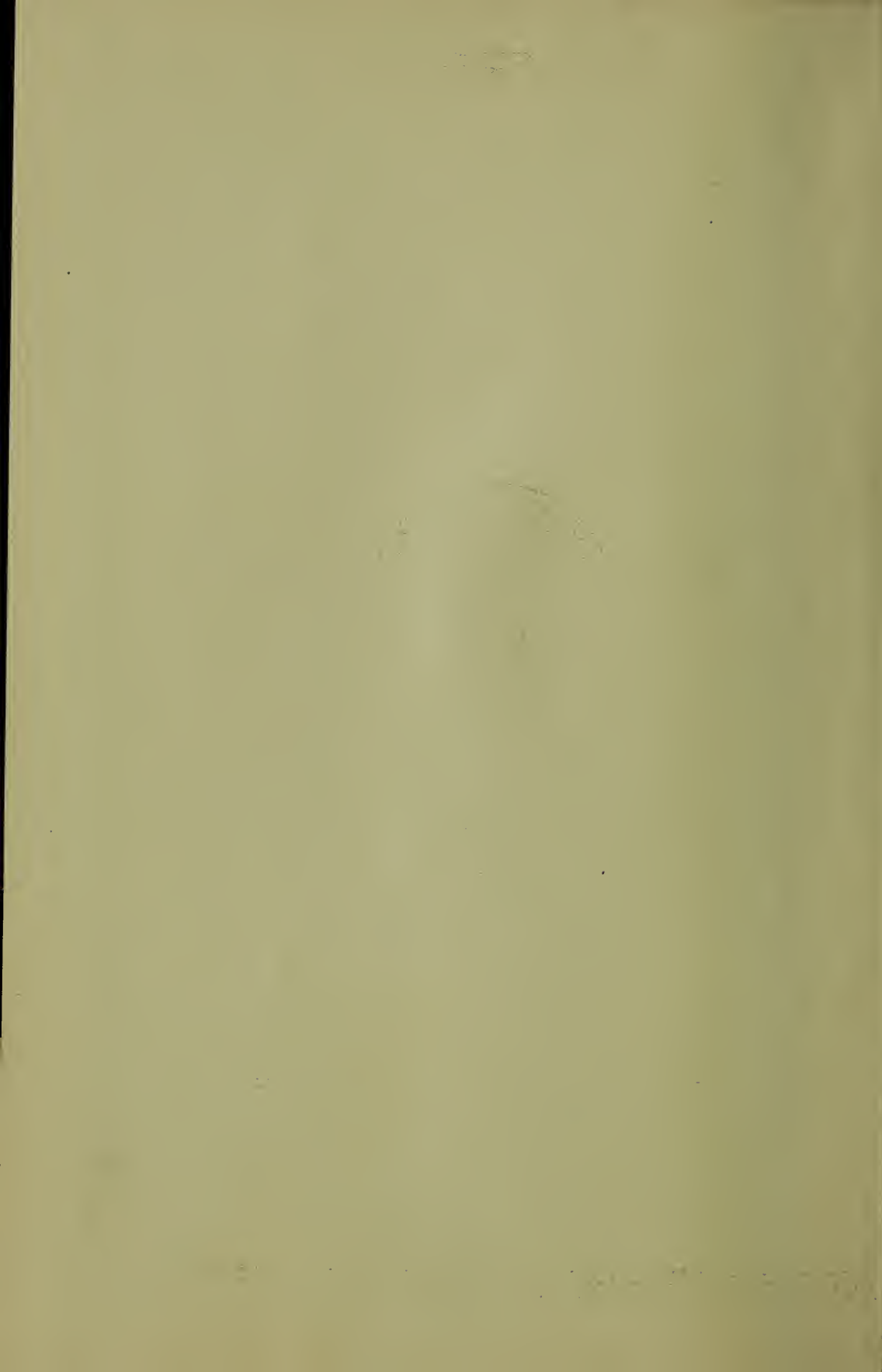
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THE HEALTH-CARE OF THE
GROWING CHILD

The Literary Digest Parents' League Series

BOOK ONE

The Health-Care of the Baby

By LOUIS FISCHER, M.D.

BOOK TWO

The Health-Care of the Growing Child

By LOUIS FISCHER, M.D.

BOOK THREE

The Character Training of Children (I)

By WILLIAM BYRON FORBUSH

BOOK FOUR

The Character Training of Children (II)

By WILLIAM BYRON FORBUSH

BOOK FIVE

The Home Education of Children (I)

By WILLIAM BYRON FORBUSH

BOOK SIX

The Home Education of Children (II)

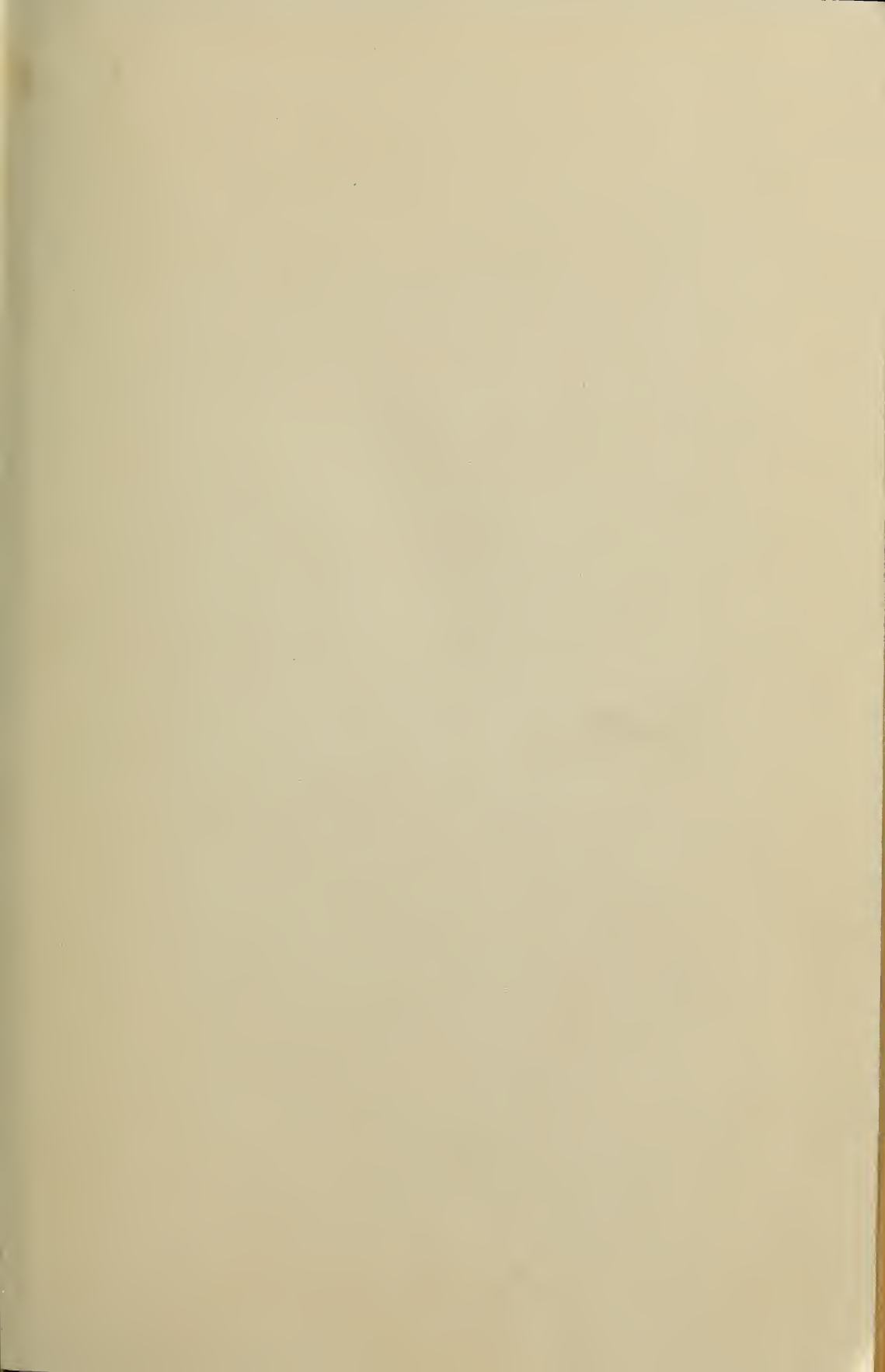
By WILLIAM BYRON FORBUSH

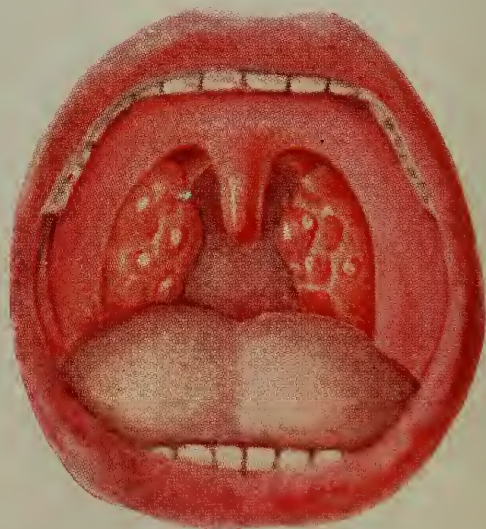
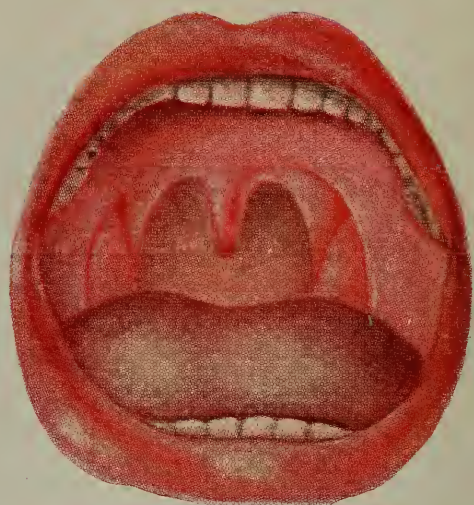
BOOK SEVEN

The Sex Education of Children

By WILLIAM BYRON FORBUSH

FUNK & WAGNALLS COMPANY, Pubs.
NEW YORK and LONDON





THE HEALTH-CARE OF THE GROWING CHILD

HIS DIET—HYGIENE—TRAINING—
DEVELOPMENT AND
PREVENTION OF DISEASE

TAORHT YHTLAH RO JAMRON A

LOUIS FISHER, M.D.

Author of "The Health-Care of the Baby", "Infant Feeding
in Health and Disease", "A Text-book on Diseases of
Infancy and Childhood"; Attending Physician to
the Willard Parker and Mercile Hospitals;
Chief Attending Pediatrician to the Children's Hos-
pital of Brooklyn; Former Instructor
in Diseases of Children at the
New York Post-Graduate
Medical School and Hos-
pital; etc., etc.

SECOND REVISED EDITION



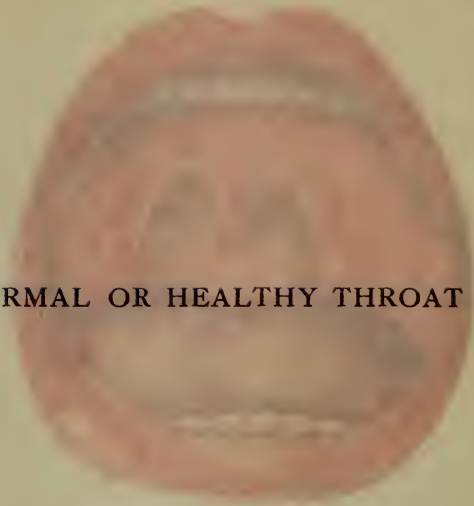
THE THROAT IN TONSILITIS

Note the yellowish-white spots on the swollen tonsils.
hanging between the tonsils is the swollen and congested
uvula or soft palate. The tongue appears coated.

FUNK & WAGNALLS COMPANY

NEW YORK AND LONDON

1919



A NORMAL OR HEALTHY THROAT



THE THROAT IN TONSILITIS

Note the yellowish-white spots on the swollen tonsils, hanging between the tonsils is the swollen and congested uvula or soft palate. The tongue appears coated.

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Published, October, 1915

Second Revised Edition, April, 1919



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Dedicated
To the Parents
of
"Little Billy"



PREFACE

THE main object of this book is to instruct and guide the intelligent mother when remote from her physician, or to advise her sufficiently in case of emergency until medical help is required and can be procured.

Our methods of feeding, hygiene, gymnastics, development, school life, and home-training are so vastly different from what they were one decade ago that every mother who wishes to keep up to date needs must read.

So many conditions may be met with in daily routine that the average mother is likely to be bewildered and perplexed unless she has a guide near her. Every mother should know the appearance of a

PREFACE

healthy throat and of an inflamed throat. She should know the symptoms of adenoids and familiarize herself with rashes due to inflammatory and also to non-inflammatory conditions within the body. She should know the normal temperature and recognize fever by her thermometer.

Faulty position while sitting at home or at school, if continued, may develop spinal curvature or round shoulders. To obviate this a series of exercises is provided which show how this faulty development may be corrected. The importance of correcting this deformity early in life will be appreciated, for if it be not checked, spinal apparatus and plaster of Paris casts may ultimately be required.

Headache is frequently due to eye-strain, but there are many other causes of headache in boys and girls. These are specified in detail.

PREFACE

Sex-hygiene is so described that every mother can understand this delicate problem. What to avoid, and how to instruct boys and girls to prevent habits which may affect their future, and especially undermine their nervous system, are explained in detail.

The communicable diseases, their dangers, complications, and modern methods of quarantine are considered and presented from the modern viewpoint. Disinfection, as formerly used, is now abandoned, and modern sanitation and isolation have been described with deference to modern views.

Many illustrations showing the value of gymnastics, intended for the development of the spine, the chest, the neck, the arms, and the legs, have been added. Weak ankles and defective walking are illustrated.

The adenoid expression so frequently noted in school children has been depicted

PREFACE

and described. This adenoid condition should receive the close attention of every mother.

The most important illustrations show clearly how to recognize measles, chickenpox, and smallpox. The throat is the seat of more trouble than any other part of the human body. Studies of a normal throat and of a diseased throat, showing yellowish spots on the tonsils, have been included.

Trachoma, which is regarded as one of the most treacherous of eye-diseases, and for which every medical inspector examines, is shown in such manner as to be unmistakable. In addition, the tapeworm, showing both segments and head, is included.

Enlarged glands are sometimes an early symptom of tuberculosis; this should be well remembered. Ivy poison is a frequent

PREFACE

source of irritation in school children, hence every mother should know and be able to teach her child the difference between poison-ivy and the harmless Virginia creeper.

Especial stress has been laid on the diet best suited to the growing child. Special diets, adapted to illness, have been given. Whenever possible, advice that may serve as first-aid to the injured has been given freely, and so may be said to abound throughout the book.

The Appendix will be found to contain a series of diet formulæ and instructions on the application of poultices, the giving of various baths and other treatments required in caring for the sick.

The author acknowledges with pleasure the valued assistance and kindness rendered to him by his publishers, who have spared neither time nor expense to aid him

PREFACE

in the preparation of this book, which he hopes may meet with the same cordial reception as that accorded to its predecessor, *The Health-Care of the Baby*.

LOUIS FISCHER.

NEW YORK, 155 WEST 85TH STREET.
September, 1915.

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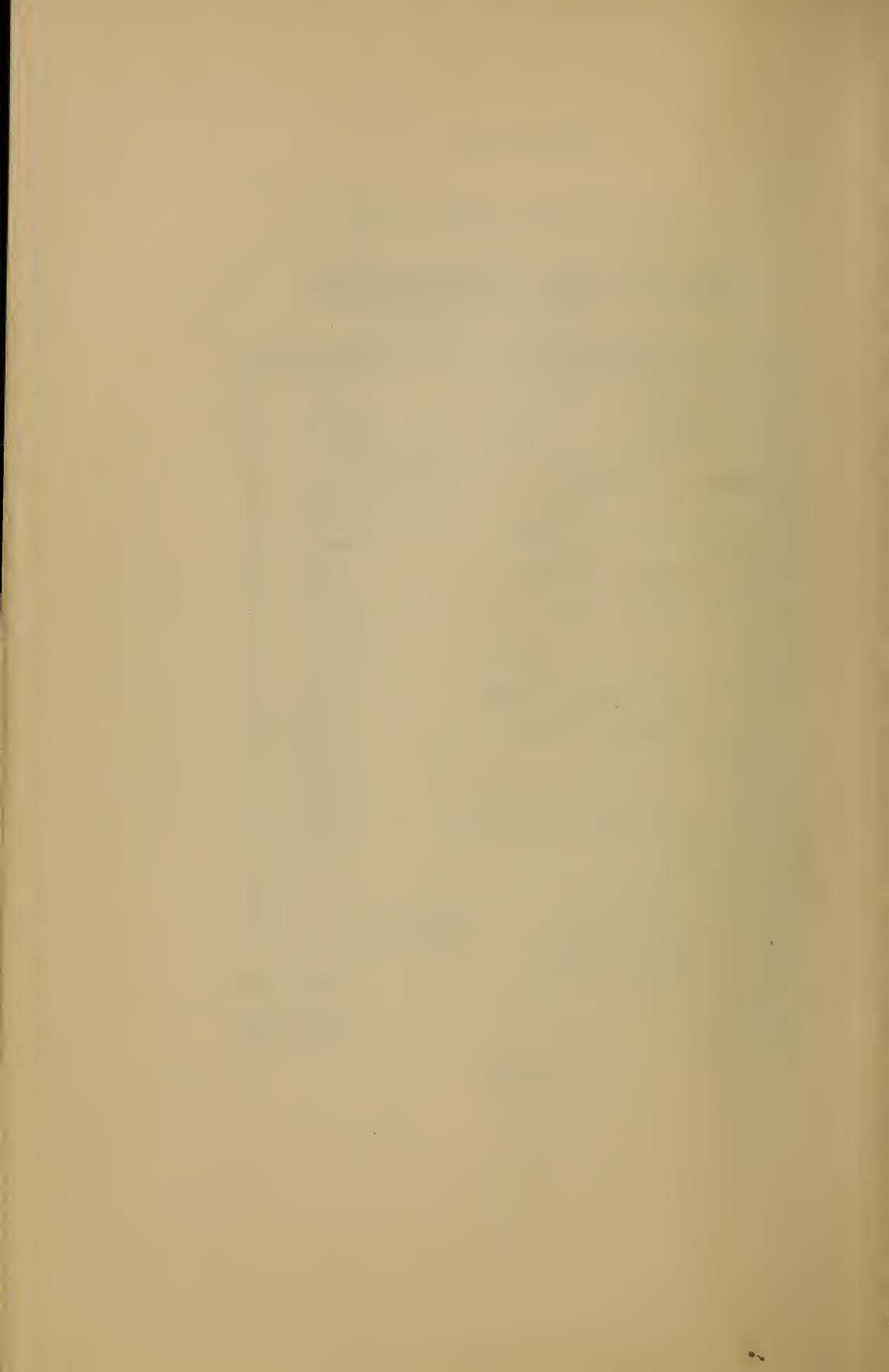
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PART I

GENERAL HYGIENE AND
DEVELOPMENT



Chapter I

CHANNELS OF ELIMINATION

THERE are four channels through which the body is cleansed of impurities. They are: first, the skin; second, the bowels; third, the kidneys; and fourth, the lungs.

The skin contains millions of pores The Skin through which the body throws off impurities, but these impurities will only be removed if the skin is thoroughly cleansed; therefore, bathing is imperative for the healthy as well as for the sick child.

Unless one or two movements of the bow- The Bowels els takes place daily, illness will result.

Nature demands that the waste products of the system, including foul gases, be passed through the body sewer. If this sewer is clogged and obstructed the poison

HEALTH-CARE OF THE GROWING CHILD

will remain in the system and give rise to various disturbances.

The Kidneys

Next in importance in elimination are the kidneys. Every child should be reminded to empty its bladder on awakening in the morning as well as before retiring at night. The bladder should be emptied at least three to four times a day. Nature demands more frequent relief if large quantities of liquids are taken. A child should pass at least one quart of urine in twenty-four hours.

With the urine is passed excessive poisons thrown off by the blood and glands, through the kidneys. If these poisons are retained they can give rise to disease.

If the quantity of urine is scant and the child passes but an ounce or two at a time then ten drops of niter may be given in a little water, every hour for three doses. If the kidneys do not respond promptly it indicates sluggishness or perhaps congestion

CHANNELS OF ELIMINATION

of the kidneys, which must be supervised by a physician.

When fresh air is taken into the lungs The Lungs we give the body a lung tonic. The foul air passed by each expiration rids the body of poisons collected within the lungs.

Chapter II

BATHING

The Tepid Tub Bath

FOR the healthy child a daily tub bath should be given in the morning, at a temperature of from 95 to 98 degrees. It is more beneficial to gradually lower the temperature of the bath two degrees daily until from 80 to 85 degrees is reached. This cooling of the water has a very toning effect on the nervous system, which is especially indicated in the nervous and restless child. In many cases it is better, immediately after the bath, to let a shower of cold water run over the neck and shoulders for a few minutes. This will not only contract the pores and prevent the taking of cold but it is one of the best tonics for the nerve terminals.

Cold Shower

BATHING

When a child is susceptible to colds and coughs, and especially if the weather is cold and damp and raw in winter, the tub bath should be given in the evening rather than in the morning. To such children the tub bath should be given first, then the supper, before retiring.

The reaction following a cold bath should be a ruddy appearance of the skin and a general glow, proving that the circulation has returned to the surface with renewed vigor. If however after the cold bath the skin does not become pink and the fingers and toes remain blue and cold it proves an incomplete reaction. The effects of such cold baths are harmful.

When after a cold bath children shiver and complain of the cold and do not feel braced up but are tired and languid, it shows that to them cold baths are depressing and harmful. We should not persist

HEALTH-CARE OF THE GROWING CHILD

with the cold baths, but instead give them tepid or warm.

Duration of Bath

A cool or cold bath for a child of from two to five years should never be given longer than two minutes, to a child of from five to ten years not longer than three minutes. Frail, sensitive, and thin children are susceptible to the influence of cold air and water, hence we should watch the body and note the color of the skin during the bath. If blueness or extreme paleness takes place, it shows that the bath should be stopped and followed by a brisk rubbing with a coarse bath towel. Exhaustion and weakness will follow in an enfeebled child if the bath is prolonged beyond the tolerance of the body. *A bath properly given stimulates, a bath prolonged, depresses.*

Warm Bath

A warm bath should never be prolonged more than five to six minutes. The temperature of the water should be from 100

BATHING

to 103 degrees. After briskly rubbing the skin dry, it is a good plan to rub with alcohol. This alcoholic sponging closes the pores and prevents perspiration, which otherwise might result in chilling the body.

Most children bathe too long in the surf. An Ocean Bath
There is no objection to giving a child an hour or several hours of activity and play on the shore, but the bath itself should never be prolonged more than ten to fifteen minutes and should then be followed by brisk rubbing. Friction after the bath to restore circulation is as important as the salt bath, and gives the reaction to the circulation.

No child of fourteen or under should be permitted to bathe more than once a day. Too Frequent
Bathing
Too frequent bathing is harmful and lowers the vitality of the system.

The good effect of living at the seashore is frequently counteracted by too much bath-

HEALTH-CARE OF THE GROWING CHILD

ing, which instead of toning the system depresses the nervous system.

Wading or
Paddling

Wading or paddling in the sea does no harm if not carried to extreme, but it may do great harm if the heat of the sun beats upon the head while the feet and legs are in an extremely cold temperature. Frequently prolonged wading will result in intestinal catarrh and in a disturbance of the nervous system.

Bath for
Sleeplessness

The warm bath at a temperature of from 103 to 105 degrees, if used from three to five minutes, with plenty of friction while in the tub, will soothe the nervous system and quiet the child. It promotes sleep.

When children are restless and their digestion is not disturbed, especially if they have been very active at school—then a very warm bath will soothe the nerves and quiet the brain, thus promoting sleep.

In order that the skin performs the func-

BATHING

tion of eliminating waste material from the body it is of the utmost importance that it be kept in as perfect a condition of health as possible. The circulation must be maintained by sufficient clothing, and the waste products of the sweat glands constantly thrown out through millions of glands in the skin must be removed by frequent bathing and friction.

Chapter III

VENTILATION

THE blood contains oxygen, and the coloring matter of the blood depends on its supply of oxygen; hence, pure air is a necessary factor in the nutrition of the body, and especially necessary for the building of healthy red blood corpuscles.

Dangers of
Foul Air

If therefore a child is permitted to breathe foul air or air robbed of its oxygen, the result will be speedily shown by the color of the skin. Such a child, instead of having a healthy, ruddy color, has a pale, sallow color, due to the lack of oxygen. When it is remembered that an ordinary gas-jet consumes as much oxygen as five people, then we can understand why it is imperative to open windows and admit pure air if gas-jets have been burning.

VENTILATION

There are other means of polluting air in the house in addition to the burning of gas. These are: gas given off from defective stoves or furnaces, cellars that are damp, house filth, exhalations from the body, and decomposing vegetable matter.

What effect has breathing of foul air on the child? Such a child is usually very susceptible to colds and coughs. These are the children that have a lowered vitality, and the bodily resistance being reduced they invite catarrh of the head and bronchial tubes; they also are susceptible to pneumonia and tuberculosis. After a winter of poor ventilation such children usually develop adenoid vegetations and enlarged tonsils. They are restless by day, very sensitive and nervous, and do not sleep well. As a result of the loss of sleep, the appetite is impaired. The bowels do not functionate properly. Such children are underweight

HEALTH-CARE OF THE GROWING CHILD

and show the evidences of malnutrition. They are subnormal, and as a result of this general weakness are more susceptible to scarlet fever and diphtheria than they would be in health.

Fresh food is to the stomach what fresh air is to the lungs. Plants absorb oxygen from the air and thrive. The same applies to the lungs, which take in the oxygen and oxygenate the blood, thus distributing healthy blood corpuscles through the vital organs of the body, also through the blood vessels which enter the skin, nerves, and the large organs of the body. The stomach, the liver, and the intestines are the vital organs of digestion, and if they carry thin blood or blood that is not up to the standard in strength, they cannot perform their proper functions and we find sluggish actions resulting therefrom. It is useless to have a child out of doors all day playing in

VENTILATION

and breathing fresh air, and then have him cooped up at night in a stuffy bedroom with windows and doors closed, and heavily blanketed. What is gained during the day by an outdoor life is lost re-breathing foul or impure air at night. Night air is purer than day air, and the windows should remain open, with full and free ventilation, because the lungs give off poisoned air continuously.

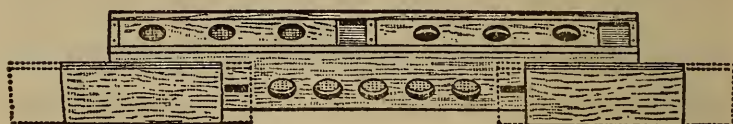
Value of
Night Air

I do not advocate placing children in draughts, but they should be given the benefit of plenty of fresh air with windows open, as thereby they will sleep better. Every mother or nurse knows that when an infant is taken into the street, especially in winter, it invariably goes to sleep, and the moment such infant is brought back into the heated house it awakens, is restless and dissatisfied until it is again taken out-of-doors.

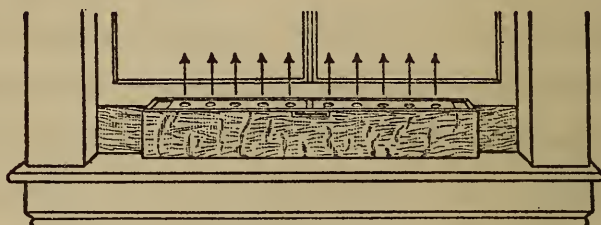
When draughts are feared, or the wind

HEALTH-CARE OF THE GROWING CHILD

blows too strongly, a simple contrivance consists in having a window-board inserted



OUTSIDE VIEW.



INSIDE VIEW.

FIG. 1.

DAYBROOK VENTILATOR WINDOW BOX.

These ventilators can be bought at department stores. A fine bronze wire screen built into the ventilator prevents dust, snow, and insects from entering. Sliding extensions make it adjustable to any window.

Ventilator Adjusted, inside view. Air is admitted from the outside, and reflected at right angles, entering the room through the top of the ventilator, where movable slides control the amount of air admitted.

after raising the window (Fig. 1). Such window-boards allow the entrance of sufficient air without causing a draught.

VENTILATION

The value of sunlight for the growth of Sunlight plants is too well known to be dwelt upon. Sunlight destroys bacteria. Disease germs die when exposed to sunlight. The rays of the sun in a room occupied by a typhoid, diphtheria, or tuberculosis patient will destroy more germs and in less time than the commonly used disinfectants. It is a strong argument in favor of opening windows, admitting sunshine, and giving the bedclothing as well as the room a sun bath.

In many sanatoria in this country and abroad patients afflicted with tuberculosis are exposed to the sun's rays. The only covering on the body is a white sheet. This is called "heliotherapy," and hardens the skin; besides, the sun's rays penetrate into the deeper parts of the lung and thereby destroy the active germ life which causes lung disease.

Chapter IV

SLEEP

AN active child walking or running about needs rest. During sleep the body restores its wasted energy. The nervous energy causes great destruction of the nerve-tissue, in which the brain, the muscles, and all the vital organs of the child's machine participate.

Sleep is nature's method of repair to the vital organs. It is like an electric current which recharges the batteries of the system exhausted by the wear and tear incident to an active life.

Amount of
Sleep Required

A weak, nervous, and frail child requires more rest, and a midday rest of one-half hour after lunch. A strong and robust child

SLEEP

may do without the midday rest. Children under six years should rest at least eleven to twelve hours. A growing child should not be compared to an adult. A growing child needs proportionately more sleep. A child of from twelve to fifteen years requires from nine to ten hours' sleep. At this critical period we should insist on children retiring between 8 and 9 P.M., and rest, even if they do not sleep, until 6.30 in the morning.

When children are deprived of sleep or do not have a sound sleep their digestion will be impaired, so that loss of appetite, constipation, and indigestion may result. Irritability and restlessness by day, dulness in school, and backwardness in both physical and mental development will result from insufficient sleep.

From the loss of sleep and appetite the body will lose weight. It is surprising to

HEALTH-CARE OF THE GROWING CHILD

note the bodily gain when sufficient sleep is given a child.

To Promote Sleep

To promote sleep the bedroom should be cool and well ventilated; this will give a continuous supply of fresh air. The clothing should be loose, to permit freedom of respiration. The bedclothing should be loose and light, and the child's arms and legs free. Straight-jacket methods should be discarded.

Sufficient food should be given at the evening meal, but the stomach should not be overloaded. If too much food is given, indigestion, colic and cramps in the stomach will interfere with sleep.

No child should go to bed at night without having had a movement of the bowels during the day. If constipation exists, nature should be assisted by giving an injection of one pint of Castile soap water. (See treatment of constipation.)

SLEEP

Exciting stories which frighten the child and frequently cause dreams should not be told before retiring. Pleasant, quiet amusements and games will aid in promoting sleep.

There are many conditions which disturb sleep, causing insomnia, and if sleeplessness continues persistently a physician should be consulted.

The eating of too much candy may cause worms which will irritate the child. Indigestion, colic, earache, toothache, adenoids, or enlarged tonsils which prevent proper breathing are frequent causes of restless sleep. If a cough is present which disturbs sleep then we should suspect whooping-cough or adenoids. Masturbation in wakeful children should be suspected and watched for; this applies to girls as well as to boys. To safeguard the child where such suspicion exists we should insist on

HEALTH-CARE OF THE GROWING CHILD

having the child sleep with its hands outside of the blankets.

The Necessity for Sleep

Concerning the necessity for sleep, Dr. Hammond in one of his articles on "Sleep" says: "So long as an individual is awake, there is not a single second of his life during which his brain is altogether inactive. . . . Its substance is consumed by every thought, by every action of the will, by every sound that is heard, by every object that is seen, by every substance that is touched, by every odor that is smelled, by every painful or pleasurable sensation; and so each instinct of our lives witnesses the decay of some portion of its mass and the formation of a new material to take its place. . . . The necessity for sleep is due to the fact that during our waking moments the formation of the new substance does not go on as rapidly as the decay of the old. The state of comparative repose which

SLEEP

attends upon this condition allows the balance to be restored, and hence the feeling of freshness and rejuvenation we experience after a sound and healthy sleep.”

Chapter V

EXERCISE—AMUSEMENTS

EVERY child requires exercise. A child will run, and jump, and shout. The jumping and shouting strengthens the lungs and voice. It also develops the chest, stimulates the appetite, and aids digestion. The running stimulates the circulation of the blood, and from this active perspiration will result. Perspiration is healthful; it is the means of removing waste products through the pores of the skin. The lungs also will throw off exhalations by taking in a greater supply of oxygen. This strengthens the blood and renders the brain more active.

Lung
Gymnastics

Children on awaking should be taught to take deep breaths. They should inhale and exhale very slowly. This form of lung

EXERCISE—AMUSEMENTS

exercise will strengthen the chest-walls and if continued for weeks, months, and years will prevent flat-chested and pigeon-breasted conditions in the growing child. Breathing should be through the nose, the mouth remaining closed. If there is any obstruction in the nose and throat such as is caused by enlarged tonsils or adenoids, the same should be removed. Thorough oxygenation of the lungs is very necessary. It is nature's method of giving fresh lung-food.

All exercises and games such as ball-playing, walking, running, bar-exercise, and football have their advantages and should be encouraged. For a poorly developed chest nothing can equal rowing. This exercises not only the muscles of the arms and chest and back but also strengthens the lower limbs.

For girls the hoop, roller-skates, bean-

HEALTH-CARE OF THE GROWING CHILD

bag, skipping-rope, tennis, and rowing are among the games which may be permitted. Swimming for both boys and girls is one of the best exercises.

Over Exercise No games or exercises should be permitted during the menstrual period. Children have a tendency to overtax their strength by too much exercise. Serious results may follow if the heart is overstrained, and it is the duty of every mother or nurse to be sure that the child's heart is able to stand the amount of exercise taken. While lack of exercise will render the muscles soft and flabby, so will too much exercise overstrain and cause, in some instances, irreparable damage.

**Proper
Clothing**

During the period of growth the bones are soft and yield readily, and this is the time when tight-fitting clothing will interfere with the proper expansion of the chest. Continued pressure on the chest by



Fig. 4

FIG. 2. *Position.*—Wand held in both hands and resting against the front of the thighs, palms turned backward.

FIG. 3. *Position.*—Wand forward upward, swing, arms straight and vertical. Wand downward, swing.

FIG. 4. *Position.*—Step-out, right. Swing wand to right horizontal. Step-out, left. Swing wand to left horizontal. Step-out, right. Swing wand to right vertical. Step-out, left. Swing wand to left vertical.



Fig. 2

HEALTH OF THE CRAWLING CHILD

big, strong, and healthy, and rowing are among the games which may be permitted. It is now in early childhood that the child is most liable to overtax his strength.

The game of marbles should be permitted during the menstrual period. Children are a tendency to overtax their strength by too much exercise. Serious results may follow if the heart is overstrained, and it is held in both hands and rest-
Fig. 2. Position.—Wand held in both hands and rest-
ing against the front of the thighs, palms turned
backward.

Fig. 3. Position.—Wand forward upward, swing
arms straight and vertical. Wand downward, swing
Fig. 4. Position.—Step-out, right. Swing wand to
right horizontal. Step-out, left. Swing wand to left
horizontal. Step-out, right. Swing wand to right
vertical. Step-out, left. Swing wand to left vertical.

During the period of growth the bones are soft and yield, and this is the time when tight fitting clothing will interfere with the proper expansion of the chest. Continued pressure on the chest by

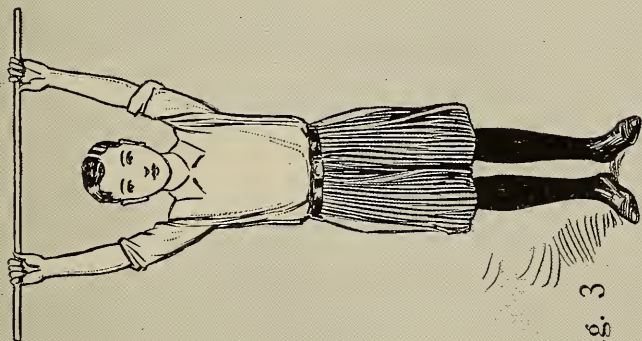


Fig. 3

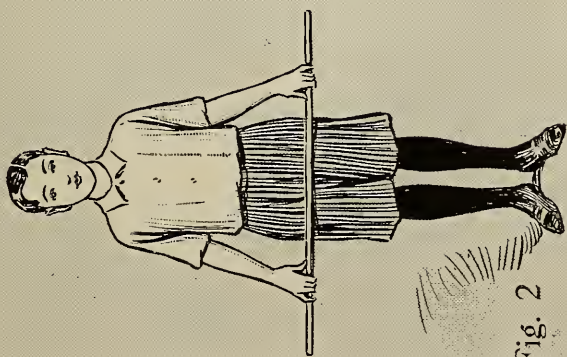


Fig. 2

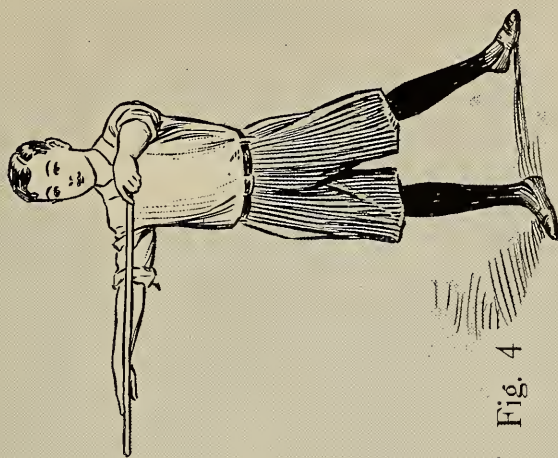


Fig. 4

EXERCISE—AMUSEMENTS

faulty clothing may result in deformity such as a flat chest. Most public schools and kindergartens give callisthenics after a short period of study and this is one of the best means of restoring the circulation of the blood after a period of brain activity. During rainy weather exercise should be given indoors.

The child should be encouraged to sleep with the windows wide open. If after studying or confinement in a room the child's hands or feet are cold, the use of pulley-weights or light dumb-bells, or a game of handball for from five to ten minutes will quickly restore the circulation of the blood.

Walking briskly is one of the best means of aiding the circulation. In modern houses the use of elevators has deprived children of one of the best means of exercise for the extremities, also for the heart, namely, stair-climbing.

HEALTH-CARE OF THE GROWING CHILD

Wand Exercise Exercise with a wand is practised in many schools. When children do not attend school this form of exercise can be carried out at home.

The wand is usually of wood, from 24 to 30 inches in length and from one-half to an inch in diameter. The ends should be rounded. These sticks can be purchased from dealers in gymnasium supplies or from furniture manufacturers. As a substitute a walking cane or the handle of a broom may be used.

This form of exercise, like dumb-bells, is especially adapted for the development of the arms. In order to properly distribute the work, these exercises, in combination with chest-, abdomen-, and leg-exercises, distribute the movements.

The inserted illustrations give an idea of the movements possible with the wand. The exercises should be continued ten to

EXERCISE—AMUSEMENTS

twenty minutes, but never to the point of fatigue. Gymnastics, twice daily from five to ten minutes, will aid in the development of the bones and muscles of the body. A graceful carriage will be acquired if the muscles have tone.

The early use of gymnastic exercises will prevent many of the deformities of the chest and spine arising from flabby, unused muscles.

Deep breathing—lung-expansion—is the best means of oxygenating the lungs. By this means we strengthen and prevent disease-germs from taking hold.

PULLEY-WEIGHT OR CHEST-WEIGHT EXERCISES

Pulley-weight exercises are adapted for the home. They are especially useful for indoor exercise during inclement weather.

These exercises should be given with one

HEALTH-CARE OF THE GROWING CHILD

hand only, later after these simple movements are mastered both hands can be used. My preference however is for the use of the gymnasium at school or otherwise under the supervision of one competent to instruct in the development of the muscles of the body.

BEGINNER'S SERIES (WITH ONE HAND)

Right Side to Machine—I. POSITION—Broad base (feet straight forward, the weight on the outer borders), left hand on the hip, right, the arm out.

1st Count—Swing right arm down, poise left. (Fig. 8.)

2d Count—Bend right arm, elbow up, poise right. (Fig. 9.)

Progression—(a) *1st Count*—Swing right arm down, bending trunk forward (trunk relaxed, knees straight). (Fig. 10.)

2d Count—As in I, count 2. (Fig. 9.)

Progression—(b) **POSITION**—Feet together.

1st Count—Swing the right arm down, change to left. (Fig. 11.)

2d Count—As in I, count 2. (Fig. 9.)

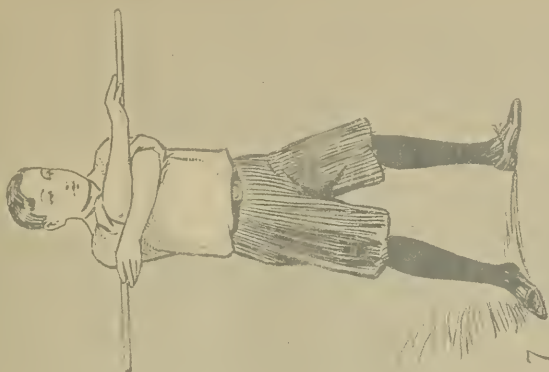


Fig. 7

FIG. 5. *Position*.—Drop to left knee. Wand aimed forward along left arm.

Position.—Drop to right knee. Wand aimed forward along right arm.

FIG. 6. *Position*.—Wand overhead, as in No. 2. Bend arms, drop back of head. Step-out, left. Bend body to left. Step-out, right. Bend body to right. Bring forward on chest.

FIG. 7. *Position*.—Retain position as in Fig. 5. Step-out, right. Cross right arm over left. Step-out, left. Cross left arm over right.

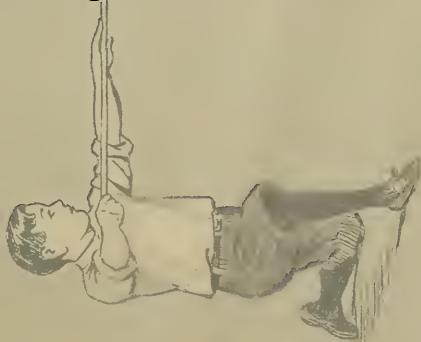


Fig. 5

CHILD-GROWING OUT OF EACH-ELLYA

and only, later after these simple move-
ments are mastered both hands can be used.
The purpose of this series is for the use of
the fingers to feel or otherwise under
the supervision of one competent to instruct
in the development of the muscles of the
body.

REHEARSER'S SERIES (WITH ONE HAND)

Fig. 5. Position.—Drop to left knee. Wand aimed

Right Side to Machine—along left arm.

Position.—Drop to right knee. Wand aimed forward

along right arm.

Fig. 6. Position.—Wand overhead, as in No. 2. Bend
arms, drop back of head. Step-out, left. Bend body
to left. Step-out, right. Bend body to right. Bring
forward on chest.

2d Count—Bend right arm.

Fig. 7. Position.—Retain position as in Fig. 5. Step-

out, right. Cross right arm over left. Step-out, left.

Progression.—(a) 1st Count—Swing right arm over right.

down, bending trunk forward (trunk relaxed,
knees straight). (Fig. 10.)

2d Count—As in Count 2. (Fig. 9.)

Progression—(b) Position—Feet together.

1st Count—Swing the right arm down, change
to left. (Fig. 11.)

2d Count—As in Count 2. (Fig. 9.)

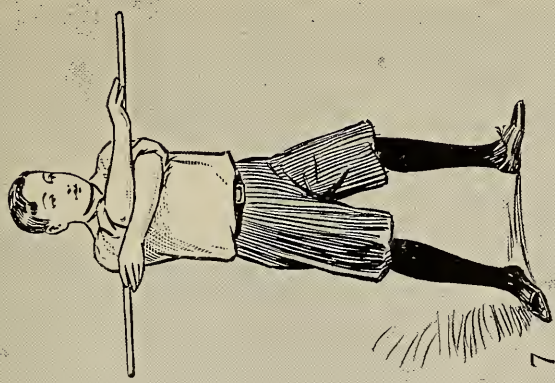


Fig. 7



Fig. 6



Fig. 5

EXERCISE—AMUSEMENTS

Facing Machine—II. POSITION—Left foot forward, right hand on hip, left arm forward, palm up.

1st Count—Swing left arm down, poise forward. (Fig. 12.) (This forward poise is always taken with the chest high, the neck forced back, and no hollow in the back.)

2d Count—Bend arm, elbow down and in, poise forward. (Fig. 13.)

Progression — (a) *1st Count* — As in II, count 1.

2d Count—Swing arm out, shoulder high, poise forward. (Fig. 15.)

Progression—(c) *1st Count*—Swing left arm down, bend trunk forward (bowing position). (Fig. 14.)

2d Count—Bend arm forward, elbow out, poise forward.

3d Count—Repeat 1st count.

4th Count—Swing left arm out, poise forward. (Fig. 15.)

III. POSITION—Broad back, right hand on hip, left arm forward.

1st Count—Swing left hand down to right ankle, bend and twist trunk right.

2d Count—Swing left arm out, twist trunk left (chest forward, weight over left foot).

HEALTH-CARE OF THE GROWING CHILD

MAT EXERCISES FOR GIRLS

To strengthen the circulation of the blood and give tone to the muscles, the following series of exercises are advantageous. They should be used in the morning, preferably before breakfast. From five to ten minutes will suffice. A tub-bath or shower-bath, followed by a brisk rubbing, after the exercises will prepare any girl for her day's work. These exercises should be omitted during the menstrual period.

FIGS. 16 AND 17

POSITION—(1) On the back, the legs stretched down.

EXERCISE—(1) Bend the knee up toward the chest, then stretch the leg down to position and relax it.

Take the movement six times with each leg.

(2) Bend the knee up as before. From this bent-knee position stretch the leg up, making a straight line to the tip of the toes.

(3) Bend the knee again.

(4) Stretch the leg back to position on the floor. Do this six times with each leg.

EXERCISE—AMUSEMENTS

FIG. 18

POSITION — (2) On the back, with legs stretched down.

(1) Raise the arms straight in front of the body and over the head until they touch the floor. Reach up with the finger tips, stretching comfortably. Then carry the arms back to the sides again. Do this six times.

(2) Take the same exercise, drawing in a full breath as the arms are raised and letting it out as the arms are returned to the sides.

At another time, instead of carrying the arms forward overhead, vary the foregoing exercise by moving them sideways through half a circle on the floor to the same position back of the head, taking a deep breath as the arms move toward the head, and letting it out as the arms come back to the sides.

FIG. 19

POSITION—(3) On the back with knees drawn up, the soles of the feet on the floor.

EXERCISE—From this position raise the hips until there is a straight incline from the neck to knees. *Do not hold the position* and relax thoroughly before repeating. Take this exercise three to six times, limiting it to three times for a few weeks.

HEALTH-CARE OF THE GROWING CHILD

FIG. 20

For a child from five to twelve years old,
hanging on a bar and heaving or raising the body



from the floor six to eight times will strengthen
the muscles of the back and chest. It is val-



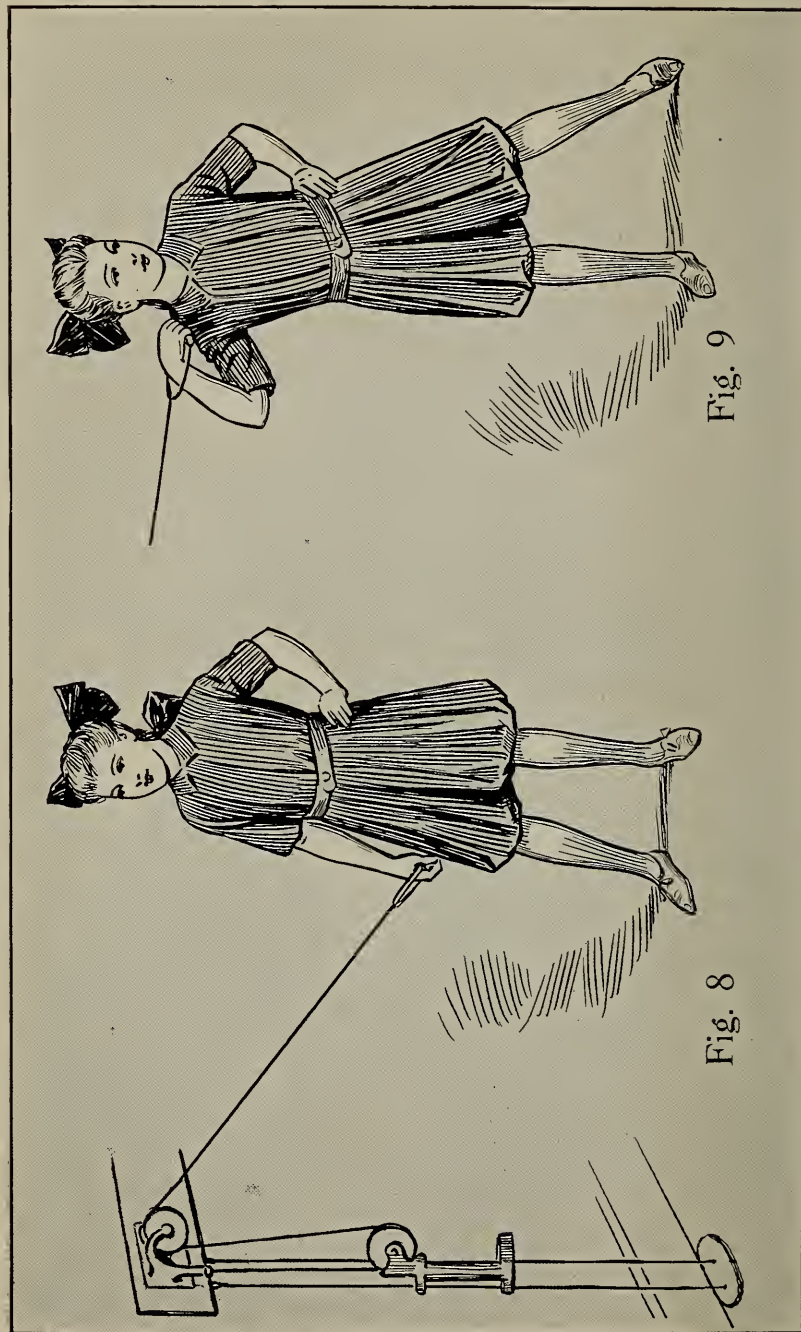


Fig. 9

Fig. 8



Fig. 12



Fig. 11



Fig. 10

Pulley-Weight or Chest-Weight Exercises

EXERCISE—AMUSEMENTS

uable to aid in the expansion and development of the lungs, and will also aid in correcting round shoulders.

The correction of deformities such as spinal curvatures cannot be carried out in the home but must be done under the supervision of a physician or one skilled in physical culture.

Chapter VI

CLOTHING—HOW TO HARDEN A CHILD

It is surprizing to see how differently mothers dress their children. A few facts must be borne in mind before deciding this important factor. The pulse of a child is very much faster than that of an adult, therefore the circulation of its blood in the skin is more active. The surface of the body of a healthy child is warmer than that of an adult, because of the greater activity of the healthy growing child. Too much clothing, therefore, will cause an overheating of the skin, and perspiration followed by chilliness results.

Effect of
Excessive
Clothing

In addition to overheating the skin by an excessive quantity of clothing, we render



Fig. 13

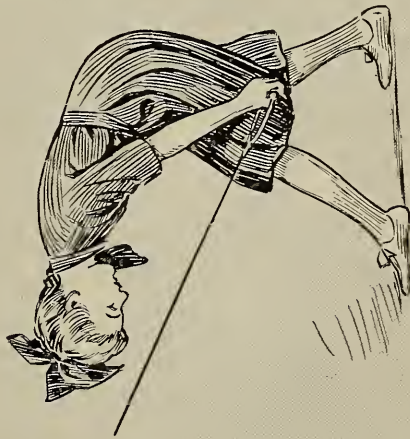


Fig. 14



Fig. 15

Pulley-Weight or Chest-Weight Exercises

CLOTHING—HOW TO HARDEN A CHILD

the child more susceptible to catarrhal affections. Many children have been brought to me in midsummer wearing the thickest of woolens. Such children are constant sufferers of either catarrhal affections of the respiratory passages or they suffer with catarrh of the bowels. If an anxious mother overheats the skin with heavy clothing by day, she will be apt to overblanket the child at night. A child so treated invariably suffers with colds as well as restless nights.

It is surprizing to see how much good can be accomplished by resorting to a radical change. Give a tepid or cool bath in the morning, reduce the weight of the underclothing both winter and summer, give less blanketing, and a cool room with fresh air at night. Such a radical change will frequently cause a restless and nervous child to be transformed in a few weeks or months

HEALTH-CARE OF THE GROWING CHILD

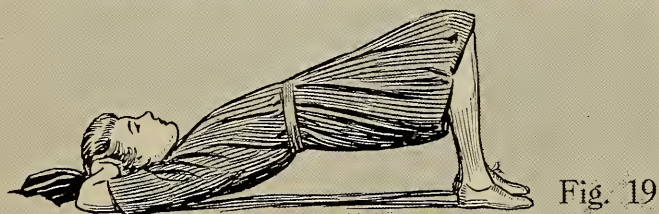
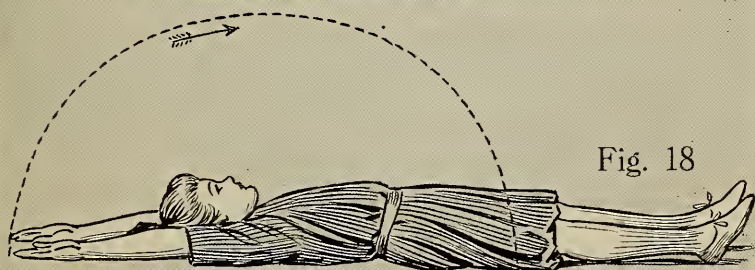
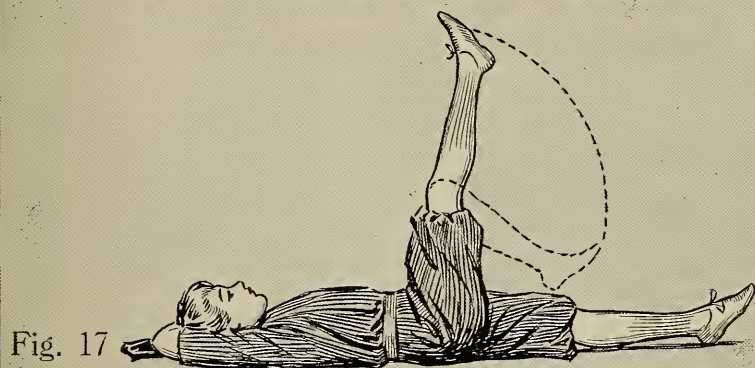
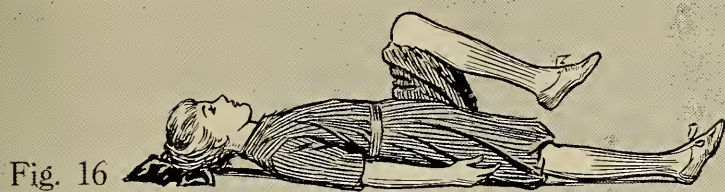
into a healthier, stronger, and less irritable child.

Hardening

By hardening a child we render it less susceptible to disease. Before resorting to extreme measures of hardening we should have the child examined by a physician. Frail children or subnormal children require toning with iron, hypophosphates or other tonics before attempting the hygienic changes suggested.

Open-air Classes

The value of fresh air as a means of bracing up anemic and pale children is so well recognized in New York and elsewhere in the United States that the public schools have established open-air classes during the winter term. In these classes, usually on the roofs of school-buildings, the children are dressed in warm clothing, many of them wearing heavy sweaters and caps. In this manner they receive instruction in the open air.



Mat Exercises

CLOTHING—HOW TO HARDEN A CHILD

For the frail child with a poor appetite, for one having enlarged glands, for the restless and nervous child, for the weak and puny child, and for the one that inherits a tuberculous tendency, the open-air classes are indicated, and prove beneficial. The child in the open air eats more, digests better, and consequently assimilates his food, thus enriching the blood, adding strength to the body and offering resistance to disease. Such children do not sniffle and take cold as easily as children brought up in warmer surroundings. There are, however, exceptions to this rule.

Chapter VII

SCHOOL HYGIENE—SUMMER VACATIONS

THERE are two places in a child's life which play an important part in its mental and physical development; they are the home and the school. Many parents have told me that their child is wilful, disobedient, and is only impressed by the teacher at school. Thus parents frequently go to school to secure the active cooperation of the teacher, to impress the dangers of faulty habits, to correct faults acquired by imitation of other pupils, and to aid in procuring home discipline.

Teachers frequently ask the mother to assist in correcting little vices and habits which apparently are unnoticed in the home.

SCHOOL HYGIENE—SUMMER VACATIONS

It is wrong to expect the child to be a perfect specimen of childhood if the home training is lacking and if the mental, hygienic, and moral training given at school is not supplemented by the parents in the home.

What can we expect of a child who sees discipline at school, good breeding, education, refinement, and plenty of fresh air, and then comes home to find a disorganized, insanitary, and ill-ventilated home, just the reverse of what the child saw at school. After a few years the child will recognize the difference and will antagonize its own parents.

Modern hygiene has been so thoroughly instilled into the minds of teachers in both public and private schools that I venture to say, with few exceptions, the ventilation and sanitary environment is as good and better in most schools than it is in the average home.

HEALTH-CARE OF THE GROWING CHILD

I know of instances where mothers told me they were glad to send their children to school because they were not capable of training them at home.

Dormitories and Boarding- Schools

In order to economize space, boarding-schools frequently use folding-beds. I have known of one case of suffocation where the bed suddenly closed itself on the sleeper.

Folding-beds are insanitary, as they seldom receive the requisite amount of sun and air. They are therefore hotbeds for disease-germs.

Ventilation is of the utmost importance, and a continuous supply of oxygen is as necessary at night as by day, to secure proper ventilation.

When children sleep in dormitories, we should try to arrange for single rooms, if possible. The supervision of boys and girls at boarding-schools is a very important factor, and we should be very careful to know

SCHOOL HYGIENE—SUMMER VACATIONS

the character of the other scholars lest bad habits are transmitted which may undermine the moral and physical welfare of our child's future.

Every mother should train her child to have the bowels move, if possible, each morning, or soon after a meal. By thus training the bowels the habit of regularity will soon be established. Many cases of constipation owe their origin to poor training. On the other hand, the food may have a distinct constipating effect, and then nothing but a change in diet is necessary.

Nature's
Demands
While at
School

If the child feels a demand of nature, permission should be given the child by the teacher to answer this call. When such desire of nature is repeatedly unanswered, a tendency toward stool-stagnation is formed. There is too much discipline enforced and too little relaxing of rules, when necessary, at school. I am constantly compelled to

HEALTH-CARE OF THE GROWING CHILD

write letters to both principals and teachers of schools, asking them to grant permission to this or that child to satisfy the calls of nature.

Summer Vacations

In deciding where to send a child for a decided change of air we must consider what portion of the human system requires development.

A healthy boy or girl, well developed and with fair appetite, may be sent either to the seashore or the mountains. At both places there is ample opportunity for exercise, recreation, and change of scene.

If the child has been diligent at school, camp-life would be an ideal change. Tent-life in the mountains with a plentiful supply of balsam and pine trees, long walks through the woods, rowing and swimming in the lake is sufficient tonic for a hard worked brain and nervous system.

SCHOOL HYGIENE—SUMMER VACATIONS

Children having a tendency to catarrh in the head, who suffer or have suffered with adenoid vegetations and enlarged tonsils will do best in the mountains. Mountain air has a tendency to dry catarrhal secretions, besides hardening the child sufficiently to lessen susceptibility to colds.

Catarrhal
Tendencies

Children suffering with winter colds, as influenza, bronchitis, or pneumonia, require toning-up of their air-passages for which nothing is better than an altitude of from 1,000 to 2,000 feet.

Children suffering with stomach or bowel affections, especially a tendency to loose bowels, will be strengthened by going to the seashore. Cold bathing need not be indulged in. Resting on the beach will strengthen the stomach and tone the bowels. Frequently a change from the city to the seashore, in a long-standing case of loose bowels, will terminate favorably in a few days.

Dyspeptic
or Intestinal
Affections

HEALTH-CARE OF THE GROWING CHILD

Nervous and Convalescent Children

Very nervous, sensitive children, and those suffering with insomnia require rest. They should have little or no excitement. A quiet sojourn in the mountains is most beneficial. The altitude should not be higher than twelve hundred feet.

Convalescent children after long-standing illness require a quiet restful climate of either the mountains or the farm.

Children with tendency to nose-bleed should not be sent to high altitudes.

Anæmic Children

Anæmic children, especially girls around the age of puberty, will do better in the mountains, especially in a camp. Camp routine will harden and develop them. I have seen frail, nervous and sensitive children transformed by a summer in camp. They were able to continue out-door activities during the winter with marked benefit in development; especially was this benefit shown in the nervous system.

Chapter VIII

CHARACTERISTICS AND PECULIARITIES OF CHILDREN

Just as an adult craves quiet, rest, and peaceful surroundings, so does a child desire the very opposite—noise, running, jumping, and perpetual motion. While this may be looked upon by some as a peculiarity in childhood, it is a normal characteristic. This important factor must be borne in mind in selecting a nursemaid. If the nurse is at all sensitive or nervous, and complains of the child's overactivity, then she is not a fit companion for the child. Children's muscles are like rubber, and from the constant use of these muscles they should sleep very soundly, due to the exhaustion of the daily exercise.

HEALTH-CARE OF THE GROWING CHILD

Fear

Fear exists in all children, and can be removed or greatly lessened by reasoning. Find out what the child fears, and try to eliminate such fear by proving the absurdity of the same.

Children should not be frightened with stories or pictures. I have known of many cases where fright produced a nervous disorder. St. Vitus's dance is a common result of a fright and very difficult to remedy in a frail, sensitive child.

Imitation

Children are great students; not only do they watch every move and expression, but they also possess the faculty of imitation to a marked degree. They will mimic and lisp and they will make grimaces of all kinds, but they will also mimic facial twitching, until the same remains as a permanent habit.

Many mothers will recall children who began to twitch the mouth or eye muscles be-

PECULIARITIES OF CHILDREN

cause some other child at school did the same. It looked cute; later on this imitation grew to be a habit which remained many years.

The brain of a growing child possesses quantity but lacks quality; it is an undeveloped organ. It is like a blank record of a phonograph—sensitive; it receives and gives off impressions. Curiosity is natural to childhood. It is natural because it is the child's method of learning. It receives impressions and sees things which its brain cannot comprehend.

Instinct compels the child to ask why is this and why is that. Childhood demands an explanation of everything that it sees and hears in the universe. It is the privilege of children to be instructed and enlightened.

A crude brain can be developed provided the environment is intellectual. To associate a child with an ignorant nurse or with a

HEALTH-CARE OF THE GROWING CHILD

woman lacking good breeding and education is detrimental to the child. The seeds of wisdom can only be sown into the fertile brain of a child in an intellectual atmosphere. On the other hand, many years are wasted, and we may have to undo the damage done by an incompetent maid in whose care the child had been placed. For this reason we should be extremely careful in selecting the companion for a child, lest we do harm rather than good. The education received in childhood is like a foundation for a house: if it is well built, it remains; if poorly constructed, we shall have sooner or later a tottering structure.

Rewards

Rewards should be given much more frequently than punishments. Children like noise, and the more noise the better. It is impossible to keep some children quiet. Reward a child if he has been quiet for a certain time by permitting him to let off steam

PECULIARITIES OF CHILDREN

and become noisy and active. We should not reward a child by giving him praise, but there are times when a word of encouragement after a difficult task is in order. Likewise, if a child acquire a bad habit, and we notice a desire to correct such habit, a word of encouragement is then in order.

The management of children will bring Punishment out their good or their bad qualities. It depends on the mother or nurse as to whether the child obeys or disobeys. This can readily be noticed at school. The same class under the management of two teachers behaves differently. With one teacher there is obedience, order, and the children learn a great deal, while another teacher cannot enforce discipline, and will complain that she has a very bad class; therefore, the bad and the good can be brought out, according to the way children are managed.

Children need activity, and it is our duty

HEALTH-CARE OF THE GROWING CHILD

to keep them interested and give them something to do, otherwise they will get into mischief.

All children can not be punished alike. Punishment must be meted out according to their physical strength. A strong child should be deprived of his most favorite game. Most boys are passionately fond of a game of ball. Forbidding this game for a certain number of hours or days will, in most cases, be all that is required.

A highly strung and nervous child can best be punished by putting him to bed. This serves the double purpose of resting the nervous system in addition to correcting some disobedience.

Always punish a child soon after the offense, and explain to him why he is being punished or corrected. After the punishment is over, do not refer to the offense or the punishment.

PECULIARITIES OF CHILDREN

Corporal punishment should not be administered to children. I invariably advise every mother in selecting a nursemaid to forbid bodily punishment. If a nursemaid is given permission to slap or otherwise punish a child in her care, while she may exercise good judgment, she may also be guilty of very poor judgment and apply corporal punishment for offenses which may be due to illness. I have known sensitive children who were punished for refusing to eat, when later it was discovered the child had a sore throat or symptoms of tonsillitis, which caused pain on swallowing.

Corporal
Punishment

Good judgment must prevail in deciding whether or no the child's offense is really serious enough to deserve corporal punishment. If children are too severely punished they become despondent, and in rare instances have committed suicide.

Despondency

There is a vast difference between wrong-

HEALTH-CARE OF THE GROWING CHILD

doing and carelessness. For example: if a child at the table accidentally breaks a plate, we should not consider this a wilful wrongdoing. In many instances it is better to let the accident pass unnoticed.

Improper training due to the parents' or nurse's fault is no reason why a child should be punished. In most instances the fault is not so much with the child as with the mother or nurse.

To train a child to be patient, kind, and gentle, be patient, kind, and gentle yourself.

A peculiarity of human nature is that where there is but one child in the family, it is usually a spoiled child. It seems that nature intended mothers to have large families, and thus divide the supervision and attention, and bestow less devotion on the one child. That there are exceptions to this rule goes without saying.

Chapter IX

NERVOUS CHILDREN

Suggestions for Their Development and Training

NERVOUS children dread examinations; they also dread punishment; and it is this dread or fear that will sometimes result in extremes. The neurotic child requires muscular training, athletics of all kinds, rowing, and especially swimming. Swimming is especially useful, as the cold water tones the muscles and nerves while the exercise strengthens and develops the same. This physical development invariably balances the highly strung neurotic child. If, however, we give to a nervous child additional home lessons and constantly watch each move and step with strict discipline, the result will be that an occasional neurotic

HEALTH-CARE OF THE GROWING CHILD

child unable to stand the mental strain will suffer a mental breakdown. It is well to remember this, because these unhappy results can be prevented if a stern parent will realize that a child has certain rights which should be respected and which need consideration just as well as a careful parent would supervise the diet.

Nervous children desire sympathy; they complain frequently and make much out of trivial symptoms. Sometimes it is difficult to distinguish between major and minor ailments. Such children, therefore, require special training. Their lives should be filled with thoughts foreign to the body, so that they are kept busy. In this manner we concentrate the attention of the child on anything but himself. While sympathy and gentleness, rather than firmness, should be the rule, it should be done with a spirit of apparent indifference on the part of the

NERVOUS CHILDREN

mother or nurse. If a child realizes that one is anxious and sympathetic, it is but natural for him to take advantage of the situation. All children do this ; hence, knowing the peculiar make-up of a child, we should restrain and repress our feelings, and never shed tears or show other evidence of sympathy in the presence of the child.

Children notice everything, they are keen observers of details, but their viewpoint is different.

A nervous child is a normal child in which we have a sensitive, highly strung mechanism requiring careful consideration.

The proper environment, therefore, for a nervous child is one in which a quiet atmosphere exists. To surround a child with a nervous, hysterical family and friends is adding fuel to the flames. Such children can not stand overtraining and exacting discipline.

Chapter X

PRECOCIOUS CHILDREN

PRECOCIOUS children manifest their superior mental equipment very early in life. Such children are keen observers of all details. They hear, see, and grasp quicker than the average child. Because of this higher mental adaptability they are frequently pushed farther ahead than their physical strength permits.

Teachers at school welcome such pupils, because they are so bright. It is important for the parents to recognize precocity, and instead of urging such a child to do more and more, we should be careful to restrain and lessen the mental burden, lest a mental breakdown occurs.

Athletics is the important medicine to

PRECOCIOUS CHILDREN

develop the muscles and to strengthen the nerves. It equalizes the circulation of the blood, especially where a tendency to congestion of the brain exists. This congestion of the brain is a normal result of precocity. Such children tire easily, complain of headache, and show fatigue. At such times all school-work and lessons must be stopped. A radical change from the lessons consists in a game of ball or in playing a musical instrument, or listening to music. This will distract the mind, and relax the nerve-tension, at the same time soothing the highly strung child.

A tepid bath followed by a cold shower is the best means of relieving an overworked child. (For hygienic management read article on Nervous Children.)

Chapter XI

THE BREATH

FOUL odors are frequently noted from a child's mouth. They always have some significance. We should, therefore, seek their origin or cause. These odors may be due to decaying teeth, they may also be caused by an ulcerated tooth or an abscess in the mouth or gum.

More often a bad breath is due to gaseous fermentation arising from the stomach. In indigestion and dyspeptic conditions foul odors from the breath are noted. Chronic swelling of the tonsils and adenoids will give off catarrhal discharges, and these discharges have a foul, putrid odor. We should go slow, therefore, in ascribing a foul breath to a coated tongue until all other causes

THE BREATH

have been eliminated. Sprew or thrush will frequently be the cause of a foul breath.

A laxative, such as a teaspoonful of senna leaves boiled in a teacupful of water and strained, to which two teaspoonfuls of raspberry sirup are added, may be given one-half hour before breakfast, and repeated one-half hour before retiring, to a child of from five to ten years old. If the foul breath is due to dyspeptic fermentation or catarrh, this will quickly remedy it.

When belching and eructation of gas continue for many days, we must reduce starchy foods, and stop cereals. Relief is frequently afforded by giving a tablet of Bulgarian bacillus after each meal. If foul breath continues after the above remedies are tried, a dentist should be consulted to see whether or no the teeth are responsible. This will be discussed in the following chapter.

Chapter XII

THE TEETH

THE teeth require thorough cleansing to prevent decay. No particles of food should be allowed to remain between the teeth. Decaying food gives off acids which cause the teeth to rot. The teeth require plenty of exercise. The chewing of coarse food is the best exercise for them. When coarse food is properly chewed it not only strengthens the teeth, but massages the gums. The teeth should be brushed with an alkaline solution. Half a teaspoonful of bicarbonate of soda in a tumblerful of lukewarm water is best for this purpose. After brushing the teeth with this solution the mouth should be thoroughly rinsed with the same.

To keep the teeth in proper condition they

THE TEETH

should be cleaned after each meal. The brush should be scalded daily, to destroy germs and cleanse the bristles.

Decayed teeth result in foul breath, inflammatory condition of the gums, and frequently alveolar abscess. The constant presence of pus back of the decayed tooth gives rise to foul breath and enters the system with the food during mastication. From this pus-poison, headache, and frequently anemia, result.

Decayed teeth, commonly known as "dental caries," when present in the milk-teeth (temporary teeth) can spread to the underlying permanent teeth. It is obvious, therefore, that caries affecting the temporary teeth is a very serious matter and one that should not be neglected by the mother.

Recently the Board of Health and the Department of Education in the City of New York began an active crusade in the

HEALTH-CARE OF THE GROWING CHILD

interest of a healthy mouth. The tooth-brush drill, stimulated by the offer of a prize for the child with the cleanest mouth and teeth, is an effectual method of instilling the necessity for a daily oral hygiene.

The gums, teeth, salivary glands, and tonsils are neighbors, and disease of one can spread to the others. It is quite likely that just as the glands below the jaw swell and participate in active inflammation within the mouth from the teeth, so, perhaps, do disorders of the teeth and gums spread to the tonsils.

Irregular Teeth

About the seventh year the milk teeth loosen and fall out and give way to the permanent teeth. The permanent teeth should be carefully watched, and if they appear irregularly the dentist should be consulted. Teeth can easily be braced and straightened if they appear irregularly. Some teeth will grow sideways instead of

THE TEETH

in their regular, natural manner. To correct this the dentist should be consulted as early as possible. In blood disorders such as syphilis and tuberculosis the teeth show the evidence of the same constitutional disease. As the blood, bones, and muscles require treatment, so will the teeth demand medication to harden them.

Riggs's disease and pyorrhea alveolaris are diseases which require local attention of a dentist. Pus-germs will burrow and frequently form abscesses under the roots of the teeth.

Riggs's Disease
and Pyorrhea

The milk-teeth should not be removed too early. When they become loose it is indicative that they are being pushed by the permanent teeth which will soon replace them. It should be remembered that the six-year molars, often called the six-year-old teeth, are the first of the permanent teeth to appear. Parents sometimes confuse these

Appearance of
the Permanent
Teeth

HEALTH-CARE OF THE GROWING CHILD

with milk-teeth and have them pulled. As no other teeth will ever take their places, spaces will be left in the jaws in after years between the wisdom-teeth and the teeth farther forward. This will either necessitate bridge-work or will leave an ugly-looking mouth.

No tooth should be extracted because it is sensitive or aches. The advisability of extraction is a matter for the dentist alone to determine.

ERUPTION OF THE PERMANENT TEETH.

The first 4 molars.....	5th—7th year.
The 4 inner incisors.....	8th year.
The 4 outer incisors.....	9th year.
The 4 anterior bicuspid.....	10th year.
The 4 canines	11th—13th year.
The 4 posterior bicuspid.....	12th—15th year.
The 4 second molars.....	13th—16th year.
The last 4 molars (wisdom-teeth).....	16th—20th year.

The decay of the teeth, commonly known as dental caries, is caused by the acid due to fermentation or putrefaction of parti-

THE TEETH

cles of food remaining between the teeth. Brushing the teeth is only part of the necessary hygiene. Such bits of food can best be removed with dental floss.

Toothache signifies that a tooth is decayed or decaying. The dentist may save the tooth by filling it and preventing the decay from spreading. To relieve a toothache apply oil of cloves on cotton into the hole of the tooth. If oil of cloves is not handy, use alcohol instead. If a tooth has just been filled and gives pain, rinse the mouth with salt water every fifteen minutes. Add a teaspoonful of common salt to a tumblerful of warm water.

To Relieve
Toothache

For the relief of pain caused by a gum-boil, apply a warm raisin poultice, which is made by splitting open raisins, removing the seeds, adding a few drops of water, and heating. Apply warm to the gum. A mustard foot-bath should also be given.

Gum-boil

Chapter XIII

HYGIENE OF THE HAIR AND SCALP

THE healthy scalp requires washing every three or four weeks. In a large city where dust and dirt laden with germs can set up an inflammation, weekly and sometimes daily washings will be demanded. Active playing in the streets with consequent perspiration will cause itching of the scalp. By scratching the same when covered with dust germs, head boils or scalp pustules may result.

Not only is this frequent washing necessary in the large cities but similar conditions are found at the seashore where the sand will give rise to irritation. After sea bathing or lake bathing one is safer to thor-

HYGIENE OF THE HAIR AND SCALP

oroughly shampoo the scalp at least once a week.

Either tar soap or liquid green soap should be used. Add enough hot water to the soap to make a lather. This lather should be thoroughly rubbed into the scalp and allowed to remain there about five minutes until it has thoroughly penetrated the same; during which time the head may be covered or protected with a towel. Warm water should then be poured or sprayed on the scalp, and with brisk rubbing the lather washed away. This lather can be gently pressed downward through the hair, but no rubbing of the hair is necessary. Many quarts of water will be required to wash away the lather. Soapy hair will never dry or feel comfortable to the head.

Washing
the Hair

Rub the scalp and hair thoroughly but gently with hot soft towels until it is perfectly dry. The heat of the towels will help

HEALTH-CARE OF THE GROWING CHILD

evaporate the moisture. One per cent. borated vaseline may be applied to the scalp and the tips of the hair, if after such a thorough shampooing it has become very dry.

The Brush

For children select a medium-hard brush which has long bristles in the center and shorter ones on the circumference. The bristles should be arranged in bunches, not too close together, the middle bristles of each bunch being longer than the surrounding ones. The bristles arranged in this manner will penetrate the hair and reach down to the impurities which lie on the scalp proper. It is the scalp which needs the brushing more than the hair.

The brush should be firmly drawn through the hair in such a way that there is a feeling of pleasant warmth upon the scalp, but not hard enough to cause a sensation of soreness.

HYGIENE OF THE HAIR AND SCALP

If the hair is left open and hanging a soft even cut brush should be used to smooth and polish the hair after it has been brushed clean with the stiff brush.

A comb is used to separate the hair into strands. It should be a large comb with long teeth set wide apart. The points should be dull and the edges rounded, so it will go through easily and not tear the hair. The Comb

A fine-toothed comb should never be used excepting to remove vermin. It should never be employed to remove dandruff, for it irritates the scalp and increases the trouble.

Both comb and brush should receive a weekly bath of ammonia and water, and a daily tapping to remove the dust.

Airing the hair by keeping it uncovered is supposed to add vigor to it and keep it healthy, but the cause of good or poor hair

HEALTH-CARE OF THE GROWING CHILD

are not dependent upon admission of air to the hair, but upon the normal condition of the stomach, the liver, the digestion, the nerve centers, in fact upon the whole organism.

When children are compelled to remain in bed during long periods of illness their hair frequently becomes matted. At times discharges from the scalp will glue the hair together. While in many cases it will be necessary to clip or cut the hair, in many other cases the hair need not be sacrificed.

The scalp should first be thoroughly washed as above described and after being thoroughly dried, a 1 per cent. borated vaseline should be thoroughly rubbed into each matted part. The mats should be gently loosened as much as possible with the fingers, after which they should be brushed with a wire brush. This wire brush consists of a number of bristle-shaped wires

HYGIENE OF THE HAIR AND SCALP

set singly and far apart in a flexible rubber backed hairbrush. Begin brushing at the tips of the hair, gradually working upward until the scalp is reached. It may require days of patient treatment and brushing until all the mats are disentangled.

Chapter XIV

GROWTH IN HEIGHT AND WEIGHT

THE following table exhibits the growth, in height and weight, of boys and girls from the third to the seventeenth year:

Age.	Boys.		Girls.	
	Height in Inches.	Weight in Pounds.	Height in Inches.	Weight in Pounds.
3	35	31	35	30
4	38	35	38	34
5	41	41	40 $\frac{1}{2}$	40
6	44	45	42 $\frac{3}{4}$	43 $\frac{1}{2}$
7	46	49 $\frac{1}{2}$	44 $\frac{1}{2}$	48
8	47	54 $\frac{1}{2}$	46 $\frac{1}{2}$	53
9	49 $\frac{3}{4}$	60	48 $\frac{3}{4}$	57 $\frac{1}{2}$
10	52	66	51	64
11	53 $\frac{1}{2}$	72 $\frac{1}{2}$	53	70
12	55	80	55 $\frac{1}{2}$	79
13	57	88	57 $\frac{3}{4}$	89
14	59 $\frac{1}{4}$	99 $\frac{1}{2}$	59 $\frac{3}{4}$	100 $\frac{1}{2}$
15	62 $\frac{1}{4}$	110	61	108
16	64 $\frac{1}{4}$	123	61 $\frac{3}{4}$	113
17	66 $\frac{1}{4}$	128	62 $\frac{1}{2}$	119

Chapter XV

PUBERTY

IN girls between the age of eleven and fifteen years the development of the breasts and associated therewith the development of the genital organs take place. As this is the stepping-stone from childhood into womanhood, a radical change takes place both in the circulation of the blood and in the nervous system. Very many symptoms directly due to this change can be noted. It is therefore an important point to prepare each and every girl for the approaching development and explain to her in plain language the significance of menstruation.

If a mother feels herself incompetent **Menstruation** to explain these details she should ask a

HEALTH-CARE OF THE GROWING CHILD

trained nurse or her physician to impart the necessary information.

In many schools sex-hygiene is being taught. While this is better than no instruction, it is still better for the mother to have the child's full confidence, and to tell her just what nature intends to do, and what it all means. Tell her the number of days that she will menstruate and that it will recur every month. This function should be supervised and each girl taught to note the date, every twenty-eight or thirty days, for the recurrence of this healthful flow.

Violent exercise, such as swimming, horseback riding, golf, and tennis, should be omitted during this period. Walking moderately is beneficial. A sponge-bath with lukewarm water will refresh the body. Tub-bathing during the period and for twenty-four hours following is prohibited.

PUBERTY

The diet should be of the simplest character. Iced foods and ice-cream should not be permitted. Vinegar and strong acid foods are prohibited. The body should be well protected with clothing, and rest should be enforced so that the young girl is not overtaxed. The bowels should be supervised so that a daily movement takes place. Several raw figs eaten before breakfast will relieve constipation. This simple procedure of emptying the bowels will frequently be all that is necessary to relieve the cramps so frequently complained of, which is the pressure of a full bowel on the distended uterus. Cramps

During cold weather the feet should be protected. We should not overtax the nervous system with too much study. Lessons can be postponed and extra home-work should not be enforced.

Every boy approaching puberty requires

HEALTH-CARE OF THE GROWING CHILD

Male Genital Development

supervision and instruction. The boy can not be isolated from the company of boys, and thus he will receive instruction in bad habits which will be very hard to break. It would appear more plausible, therefore, to have the father or the uncle or the physician give such instruction as will impart the knowledge of the development of the genital organs, their uses, and their abuses. There are many ways of approaching this subject and making it instructive without picturing horrors and frightening the frail, growing, nervous boy because one wishes to keep him sexually pure.

Masturbation

Of all the bad habits one should try to prevent the most important is masturbation. We can instruct the boy in nature's method of development of the organs and their natural seminal emissions. These take place voluntarily without masturbation or sexual intercourse. These emissions take place

PUBERTY

normally once every one or two months and consist of a loss of an excess of seminal fluid.* The frequency of their recurrence usually depends on the amount of sexual thought or stimulation. In some boys a glass of wine or beer is sufficient to excite or provoke an emission. In others, female society will so excite the boy that he will have an emission at night.

Such information should be imparted to every boy, that he may know nature responds to various forms of excitement, be they alcoholic or sexual, and that the occasional loss of fluid at night is not harmful.

Do not allow boys to read trashy literature with which the country is flooded, and which is sent out by fake medicine companies to impress and frighten the boy, for business reasons.

*At times a glairy fluid resembling mucus follows excitement, the loss of which is not detrimental to the system.

HEALTH-CARE OF THE GROWING CHILD

The habit of masturbation is dangerous because of the ease with which the act is performed, and because when once formed the boy will be backward, languid, tired, heavy, and nervous. Such boys have dark rings under their eyes, and they appear dull. The feet and hands show a cold, clammy perspiration, and they are neither sick nor well. They lose ambition and do not push ahead. They are the so-called dullards. As a rule, if questioned they will deny the habit, and it is only after they have been told that the symptoms of such self-abuse is stamped on their face that we can compel them to admit the habit.

To treat this habit a cold shower or cold bath or a spinal douche should be ordered. Walking in the open air is excellent. The quantity of meat should be reduced, and milk, vegetables, and fruits given liberally. Large quantities of water or lemonade

PUBERTY

should be ordered, but neither wine nor alcoholic beverages should be permitted. Tea and coffee also should be prohibited. Cooling and nutritious food, such as milk, buttermilk, cocoa, and malted milk, may be permitted. Spices and highly seasoned foods should not be given.

Very warm clothing should not be worn next the body. Cotton or linen should be substituted for flannels.

My plan has been to give every boy the benefit of the doubt and warn him besides giving him the above outlined treatment. If, however, we note after several weeks or months that the boy has resumed his former habits, then we can resort to sterner measures, and remind him that nervous breakdown, mental breakdown, and even insanity can follow if he does not master the situation and control the habit.

It is important, as the boy reaches pu-

HEALTH-CARE OF THE GROWING CHILD

Advice to Boys

berty, to warn him of the dangers that exist in life. Sexual intercourse with a diseased girl may be the means of inoculating him with syphilis, which will prove a very costly lesson. The danger of being inoculated with gonorrhea while a poison of a lesser degree, can also prove costly. If the discharges from a boy diseased with gonorrhea should accidentally be rubbed into an eye, blindness may result therefrom. Such apparently trivial conditions are important enough for every parent to know, and to impart such knowledge to a growing boy, always having in mind that by so doing we may prevent him from contracting such a disease.

Care of the Genital Organs

The female child should be washed with soap and water. Unless there is a special reason, and it is ordered by the physician, no dusting powders nor salves should be applied. Small deposits of dusting-powder

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combined with any possible discharge may adhere like glue and frequently be the cause of inflammatory adhesions, which produce an irritation and may later give rise to the habit of masturbation.

In the male child not circumcised, the foreskin should be pushed back over the glans, and all accumulations removed with soap and water while in the bath. Particles of cheese-like deposit which do not readily wash away may be removed with cotton and warm oil.

No more or frequent handling of these parts than is absolutely necessary should be done because of the danger of starting the habit of masturbation. Children who do not have a tendency to discharges, but who have a dry mucous membrane, may not require these genital baths more frequently than once a month.

Chapter XVI

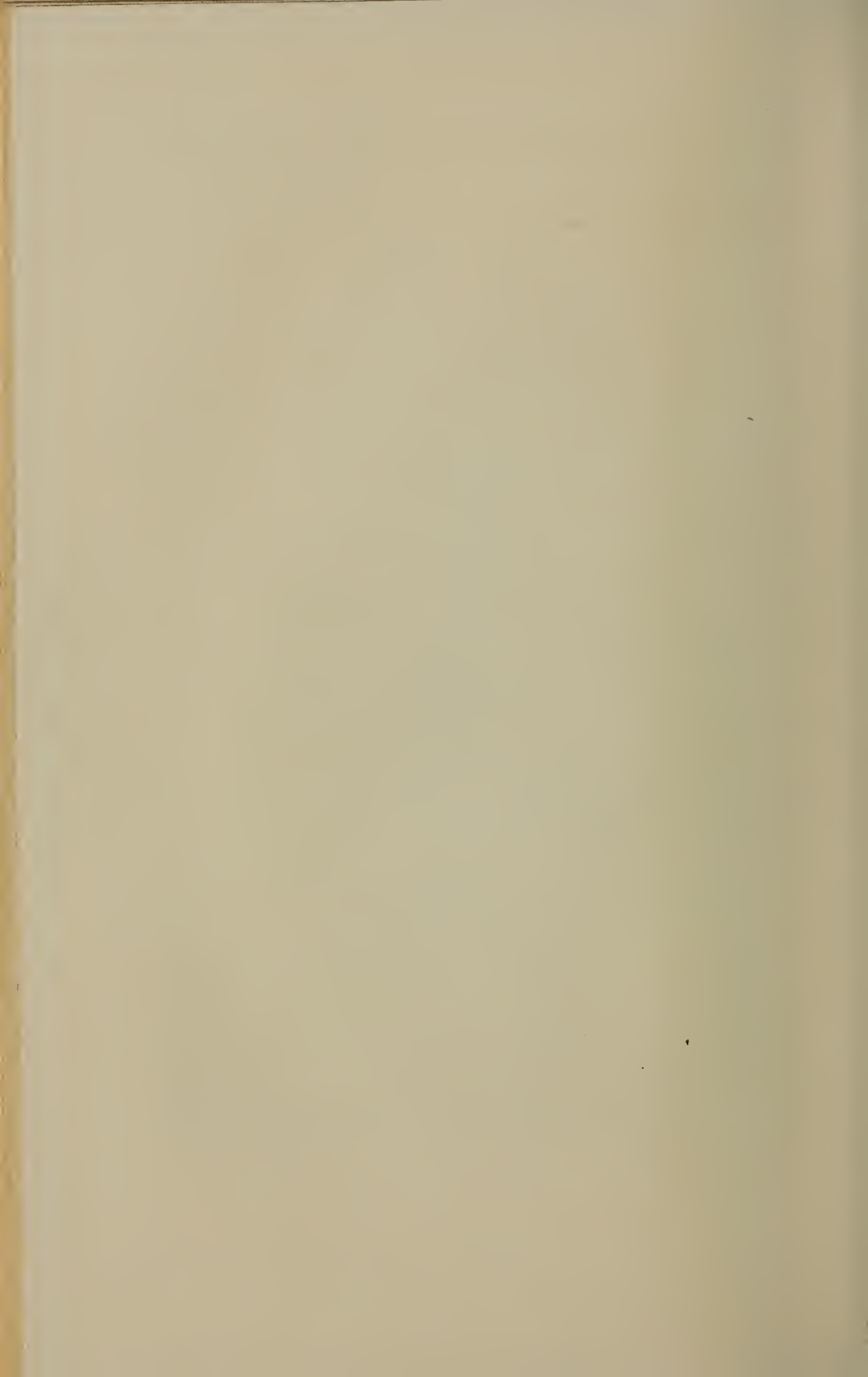
VACCINATION

WE vaccinate a child with virus taken from a cow and induce a disease which protects the child against smallpox. Any one familiar with the history of the ravages of smallpox before the introduction of vaccination will remember the enormous mortality which prevailed and the untold suffering and pock-marks in those that recovered.

Vaccination properly performed consists in cleansing the skin so that no germs or filth can enter the wound and contaminate the virus used. It is better to leave the vaccination of a child to the physician. No mother or nurse should undertake to vaccinate the child. There is no danger in vaccination if properly done, on the con-



Small-pox in an Unvaccinated Child. Vaccination with cow-pox would have prevented the above (Shamberg).



VACCINATION

trary, there is only the assurance of protection if an epidemic of smallpox should arise.

During the active stage of the vaccination the child should be isolated as well as possible from any one suffering from a contagious disease. The germs of erysipelas and diphtheria readily enter a fresh vaccination so that if any one is ill in the same house, it is better to postpone the vaccination until after the patient recovers.

Five to seven days after inoculation, inflammation or redness around the inoculated area will be noted. This is the natural course of taking. If this redness spreads and the skin is swollen and tense, the physician will usually prescribe a cooling moist dressing of lead-water or a one per cent. boric acid solution. The inflamed surface is covered with several layers of gauze saturated with one of these solutions until the

HEALTH-CARE OF THE GROWING CHILD

inflammation subsides; this usually takes two or three days.

One inoculation will protect a child about five years. It is necessary, therefore, to revaccinate every five or six years.

During the active stage of vaccination the diet should be restricted to milk, cereals, broth, vegetables, and fruit. No meat or eggs should be given. Water should be given liberally, also all fruit-juices.

The bowels should be watched and if constipated raw figs with senna leaves should be given before breakfast. Stewed peaches, prunes, and apricots will aid in keeping the bowels loose. A shield is unnecessary. A piece of gauze or linen sufficiently large to protect the wound from the clothing should be placed over the vaccinated area and changed every morning and evening. Do not apply salves. If the linen or gauze adheres to the wound, soak it loose with oil.

VACCINATION

As a rule, the active stage persists several weeks. Even though there has been a temperature of 100 or 103 degrees, there is no danger to be feared. A vaccinated child should receive its daily bath and should play and go to school as though nothing had happened. It is only if active inflammation follows that we should keep the child quiet at home, or if it has fever over 101 degrees.

Chapter XVII

TEMPERATURE—FEVER

THE normal temperature of the body, taken in the mouth, is $98\frac{3}{5}$ degrees. If taken in the rectum it varies between $99\frac{2}{5}$ and $99\frac{4}{5}$ degrees. A temperature, therefore, under 100 degrees in the rectum should be regarded as normal. If it is higher it shows some derangement of the system.

Active and excitable children always have a slight rise in temperature. For example: if a child plays vigorously it may develop a temperature of $100\frac{2}{5}$ degrees in the rectum, and after resting the body an hour the temperature will go back to normal. A child that is easy-going will usually have a lower temperature than one with an ex-

TEMPERATURE—FEVER

citable temperament. Nervous children have higher temperatures than the phlegmatic type of child.

There is a slight difference between the morning and the evening temperature. It is usually about 99 degrees in the morning and about $99\frac{3}{5}$ degrees in the evening. This is a normal variation. No one can judge temperature by feeling the surface of the body with the hand. To be accurate we must always employ a clinical thermometer.

In taking the temperature, shake the thermometer so that the column of mercury drops below 95 degrees. Apply vaseline or oil to the end containing the mercury. Place the child on the left side and insert the thermometer one inch into the rectum. Let it remain two to three minutes. The end of the column of mercury indicates the degree of temperature. The thermometer should be washed with soap and cold water.

To Take
Temperature

HEALTH-CARE OF THE GROWING CHILD

The mercury remains registered in the tube until it is again shaken down.

The value of the thermometer in recognizing fever is well known. It is especially valuable when the child is peevish or restless. It is a serious mistake to discipline a child for naughtiness if it is suffering from fever. To detect fever we must use a thermometer. A healthy child will have a normal temperature, a sick child will have fever. When children breed disease, as for example before the eruption of measles, scarlet fever, or diphtheria, they are dissatisfied, sensitive, and will not eat. To spank such a child or force it to eat a full meal regardless of its tolerance for the food is inviting trouble. If however the temperature is taken, we can recognize the presence or absence of illness. Thus my advice is, use a thermometer if in doubt, but do not use a thermometer daily or

TEMPERATURE—FEVER

several times a day as a matter of routine.

Fever in an older child signifies more than it would in an infant. The body is older, the system is stronger, and there is usually more resistance to disease than in infancy. Notwithstanding this there are distinct diseases to which childhood is susceptible. Every mother therefore should bear in mind that while fever may be caused by a spoiled stomach or intestinal stagnation of stool, the large majority of fever-attacks are due to other causes.

Significance
of Fever

Every mother should think of the possibility of her child breeding a disease. A slight cold in the head with fever may be influenza or grippe, but it also may mean the development of measles. In like manner fever and vomiting with loss of appetite may be due to indigestion or an overloaded stomach, but it may also be due to the be-

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ginning of scarlet fever. Loss of appetite—refusal to eat—may be due to a spoiled stomach, but it is also well known that a child will refuse to eat when it has a sore throat and perhaps not enough ability to locate the pain in the throat.

From what has been said it is safer to keep a child in bed for several days if a temperature of 101 degrees or higher exists, until the temperature becomes normal. No one would care to have a child walking around in the street for the sake of “hardening” it and suddenly find a day or two later that the child was suffering with measles or scarlet fever. Such risks may prove costly and occasionally fatal.

Feeding
During Fever

At the beginning of fever put the child to bed and stop all solid food. Give milk, soup, or broth. Orange-juice or lemonade for thirst. Calomel, one-fourth grain, repeated every fifteen minutes until four

TEMPERATURE—FEVER

doses are given, and then followed by a teaspoonful of rhubarb and soda mixture every hour until three doses have been given. Water should be given frequently. If attention to the diet and the cleansing of the stomach and bowels does not bring the fever down within twenty-four hours, call a physician.

If a child is well in the morning and develops a sudden rise in temperature of 103 or 104 degrees in the evening, we should suspect stomach- or bowel-trouble. An enema of soap-water will rapidly eliminate stagnating or decomposed stool and thereby reduce the temperature. Sudden Fever

Sudden high temperatures are not as serious as low, gradually increasing fever. A temperature that starts with 100 degrees and gradually rises one-half or one degree more each day signifies a slowly developing disease somewhere in the body. It may be

HEALTH-CARE OF THE GROWING CHILD

Scanty Urine

an abscess, it may also be typhoid fever, scarlet fever, or kidney-disease. Note if the urine is scanty; if so we can eliminate poisons through the kidneys by giving 15 drops of sweet spirits of niter every hour until five doses have been given. If the head is very hot and the feet are cold, a mustard foot-bath should be given, and cold cloths applied to the forehead and around the neck. Sponging the body with alcohol and cold water will be found soothing and will reduce the fever.

If a rash develops during the course of fever, isolate the child until the physician can see the case.

PART II

NUTRITION

Chapter I

THE DIET

ALL children cannot be fed alike. As every face is different, so is each and every stomach a law unto itself. One child can digest food that will render another dyspeptic. Then again, certain children require special articles of food that others do not. A lean and constipated child requires fat in the form of butter or cream or bacon, and a given quantity of starchy food, such as potato. In this same type of child fruit and fruit juices are demanded to offset the usual tendency to stagnation of the stool. Very fat children, and especially those having a tendency to loose bowels, should receive less fruit, less butter and no cream, but should be given a large

Individual
Requirements

HEALTH-CARE OF THE GROWING CHILD

variety of vegetables, chiefly spinach, peas, beans, lettuce and beets.

The feeding of children is most important. By giving proper food at proper intervals, growth and development take place. Many diseases in childhood are due to and caused by improper feeding. Every mother should know about these diseases so that she can guard against them.

Peculiarities in Taste

Children have peculiarities, their likes and dislikes. One child will require sweetened food, while another, equally healthy, will crave salted foods. Some will refuse an undisguised egg, but will eat eggs in the form of a custard or flavored omelet. A mild relish or sauce will frequently be the means of cultivating a taste for meat, when meat alone may be refused. I do not advocate giving spices or condiments as a rule, but there are times when children will literally go on a hunger-strike, if some

THE DIET

of their little whims are not gratified. Children will seldom submit to force. Many of them are so disgusted with forced feeding methods that they will vomit after partaking of a forced meal at which they rebelled. This is especially true of the nervous, sensitive, highly strung child.

Many mothers have a mistaken notion Milk that children up to adolescence must take at least a quart of milk a day, in addition to their regular diet. This is unnecessary and frequently promotes dyspeptic conditions by overtaxing the stomach after it has partaken of a full meal.

It is impossible to state the quantity of Quantity
Required food a child of three, six, or nine years requires, because the capacity of every stomach varies and the digestion also varies. One child can assimilate twice as much meat as another. The same applies to the total quantity of vegetables par-

HEALTH-CARE OF THE GROWING CHILD

taken. There is no hard and fast rule that can be applied to each and every child.

Feeding Interval

After the third year and until the sixth year the child should be given three meals a day—at from 6.00 to 7.00 A.M., from 12.00 to 1.00 P.M., and from 5.30 to 6 P.M. There is no objection to giving a glass of milk or weak cocoa between meals if the child asks for it. If, however, there is a tendency to constipation, then one may give a cup of malted milk or buttermilk between meals.

The following diets can be used as a guide:

For a Child Three to Six Years Old

BREAKFAST: 7.00 to 7.30

Orange, apple sauce, prunes, or figs.

Saucer of farina, cream of wheat, yellow cornmeal, oatmeal, hominy, or wheatena. (All cereals to be steamed in water at least two hours. Served with cream and sugar.)

THE DIET

If appetite warrants it—a coddled egg and strip of bacon.

Roll, toast, or corn muffin. If constipated, bran muffin.

Cup of milk or cocoa.

DINNER: 12.00 to 1.00

Chicken, lamb, beef, or vegetable soup, expressed steak-juice.

Calf's foot or chicken jelly, raw scraped steak, minced chicken, or fish.

Spinach, peas, beans, young carrots, beets, asparagus, cauliflower, baked or creamed potato.

Stewed apples, peaches, apricots, prunes, or berries. Sponge cake, ladyfinger, or gelatine pudding.

Water.

SUPPER: 5.30

Two poached or scrambled eggs, ham or jelly omelet. Custard, junket, corn-starch or tapioca pudding.

Cream cheese.

Bread and butter.

Sliced banana with milk or raw fresh fruit.

Cup of milk, malted milk or cocoa.

HEALTH-CARE OF THE GROWING CHILD

For a Child with Weak Digestion, from Six to Ten Years Old

Many children of the neurotic type have a peculiar palate. They crave a change of diet and tire easily if the same flavor is continued. I have accordingly arranged a series of diets which can be varied from day to day, so that the most capricious appetite can be gratified.

BREAKFAST

Cream of wheat and cut figs, served with cream.
Soft-boiled egg.
Corn bread.
Cup of milk.

Or:

Wheatena cooked with dates, served with cream.
Wheat cakes and maple syrup.
Graham bread.
Malted milk (four teaspoonfuls Horlick's malted milk to a teacup of hot water).

Or:

Oatmeal with cream.
Egg poached in bouillon.

THE DIET

French roll.

Cup of cocoa.

Or:

Farina and seeded raisins with cream.

Broiled bacon or ham with creamed potato.

Whole wheat bread.

Cup of malted milk.

Or:

Baked apple with cream.

Hominy.

Corn bread.

Cup of milk.

Or:

Orange.

Scrambled eggs with minced tongue or ham.

Toast.

Cup of cocoa.

If constipated a saucer of Kellogg's bran may
be given as a cereal, or two teaspoonfuls of
bran may be mixed with the cereal.

LUNCH

Split pea soup.

Lamb chops.

Baked potato.

Ladyfingers and jam.

Water.

HEALTH-CARE OF THE GROWING CHILD

Or:

Noodle soup.

Fried halibut or fresh mackerel.

Spinach.

Baked apple with cream.

Wafers and water.

Or:

Cream of celery.

Broiled chicken, squab, or creamed chicken on
toast.

Asparagus.

Prune jelly with cream.

Water.

Or:

Beef and sago soup.

Bluefish or flounder.

Young carrots.

Apple sauce.

Wafers and water.

Or:

Cream of asparagus or vegetable soup.

Broiled sweetbread or stewed tripe.

Baked sweet potato.

Angel-cake.

Or:

Chicken and rice soup.

Roast beef, steak, codfish or smelts.

THE DIET

Peas.

Celery.

Stewed peaches or apricots.

Wafers and water.

SUPPER

Glass of zoolak or buttermilk.

Cream cheese.

Toast.

Apple or fresh fruit.

Or:

Ham omelet.

Toast.

Glass of milk.

Grapes.

Or:

Baked macaroni with cheese.

Fresh lettuce or celery with salt.

Cup of cocoa.

Imported Albert crackers.

Or:

Scrambled eggs.

Split banana baked in shell.

Saltines.

Glass of milk.

Or:

Rice pudding with almonds and raisins.

HEALTH-CARE OF THE GROWING CHILD

Cup of malted milk.
Bread with butter and jam.
Fresh fruit.

Or:

Apple or cherry custard.
Cream cheese.
Saltines.
Cup of cocoa.

Or:

Jelly omelet.
Swiss cheese.
Uneda biscuit.
Cup of cocoa.

Or:

Cold breast of chicken.
Lettuce or celery with salt.
Sliced pineapple with cherries.
Glass of milk.

In feeding a child of from ten to sixteen years, we should remember that the child is still growing, and that his individual requirements are vegetables, cereals, fruits, eggs, fish, and meat. Instead of one egg, two may be given at a meal. Wheat bread

THE DIET

is very nutritious; if, however, it has a tendency to constipate, then bran or Graham bread may be given. Corn bread baked in the morning may be served in the evening.

Diet for a Child over Ten Years of Age

MORNING

Raw fruit in season.

Wheatena, oatmeal, farina, cream of wheat, corn-meal grape nuts, wheat flakes or shredded wheat biscuit.

Ham or bacon and eggs.

Corn or bran muffins, wheat or Graham bread, rolls.

Water, milk, or cocoa.

NOON

Chicken, beef and noodle, mutton, and all vegetable soups. **Soups**

Lamb chops, steak, roast beef, chicken, fish, raw chopped beef, lamb or beef stew. **Meats**

Peas, beans, carrots, beets, potato, corn, cauliflower, or asparagus. **Vegetables**

Celery, lettuce, tomato.

HEALTH-CARE OF THE GROWING CHILD

Dessert

Berry pies, corn-starch, tapioca, custard, or stewed fruits.

Wheat or Graham bread.

Water.

EVENING

Scrambled eggs or omelet.

Cold chicken, lamb, or ham.

Swiss or cream cheese.

Custard or sponge-cake.

Bread, butter, and jam.

Fruit.

Water, milk, or buttermilk.

Diet for an Underweight Child

To increase a child's weight, certain ingredients of the food must be modified. This will alter the general nutrition of the body and give more weight. A word of caution is necessary. Do not force the change from a light diet to a richer and more concentrated form of food too suddenly, as thereby we may overtax the digestive function and induce dyspepsia, which may permanently weaken the stomach.

THE DIET

To increase the weight of a child we must increase the fat content of the food. A teaspoonful of cream added to a cup of milk several times a day is indicated. If this cream is well digested and causes no disturbance we may add another teaspoonful of cream and increase in four or five days until three teaspoonfuls are added to each cup. Butter should be given liberally. It may be given on bread or potato. Sugar may be given liberally on cereals and puddings. If cereals such as farina, cream of wheat, Pettijohn, or wheaten are well borne they should be given at least once a day. They should be served with cream or butter, and sugar.

For the noon meal, puddings, such as tapioca, arrowroot, or corn-starch, may be given. Macaroni and home-made noodles are very nutritious and increase weight. Beets, carrots, potatoes, peas, beans, and

HEALTH-CARE OF THE GROWING CHILD

lentils are vegetables that add greatly to both nutrition and weight of the body. Omelet, pancake, sponge-cake, rice pudding, and custard, are desserts which are very nutritious and increase the weight.

Olive oil may be given as a dressing on lettuce. Cocoa, chocolate, nuts, bacon, and eggs will aid nutrition.

Diet for a Very Fat Child

Reduction Diet

Before reducing the weight of a child we should have the heart carefully examined. In some cases it is important to have a blood-examination made. This examination will determine the number of red blood-cells, which is a good guide to go by during the reduction-treatment, as thereby we can learn whether or no the blood supply has been weakened by the restricted diet.

If the reduction is accomplished too rapidly it will be at the expense of the general

THE DIET

blood supply. A weak heart and collapse may result therefrom.

The diet for children with a tendency to fat formation should have the quantity of liquids restricted, thus very small quantities of milk, soup, broth, or even water should be given. Fat children should receive small quantities of meat and fish, but large portions of vegetables and fruits should form the bulk of their diet.

It is very important to assist the bowels by giving a laxative that will carry off fluids. One of the best laxatives for this purpose is the lapactic pill. This may be given before retiring at night and may be repeated every evening until liquid stools are produced daily.

Cereals, butter, and cream should be given in very small quantities. Eggs, fish, lean beef, ham, lamb, and veal in moderation. Candies, cakes, and nuts are prohibited.

HEALTH-CARE OF THE GROWING CHILD

Diet in Fever

When fever occurs all solid food should be stopped. By fever is meant a temperature higher than 101 degrees. Eggs, meat, vegetables, and cereals should be omitted. Milk, gruel, broths, fruit juices, and in rare instances junket, gelatine, toast, and biscuit may be given. These diets are to be given only until the physician can examine the patient.

In many surgical conditions, where the digestive tract is normal, and no fever exists, it may be possible to give a full diet of meat, eggs, and vegetables to hasten repair and aid in recovery.

Diet in Diarrhea

If ordinary looseness of the bowels exists and there is but a slight rise in the temperature, give a good dose of castor-oil and stop all milk. Give rice, steamed in water, mut-

THE DIET

ton, lamb, or veal broth with rice or barley, toast, corn-starch, or tapioca pudding, junket or cream cheese. No fruits should be given. For thirst, weak tea or water may be given. Albuminized tea, or tea containing the white of egg, may be given many days in succession. An interval of at least four hours is required between feedings.

Poor Appetite

Poor appetite may be due to a general weakness of the stomach or a loss of tone. It may also be due to a catarrhal condition. When children suffer with nasal catarrh, adenoids, or enlarged tonsils they will indirectly disturb the stomach and thereby cause a loss of appetite. Constipated children usually suffer with loss of appetite. When the stool stagnates in the bowel, we must cleanse the intestines with a teaspoonful of Epsom salts or Rochelle salts dis-

HEALTH-CARE OF THE GROWING CHILD

solved in sweetened water. This dose may be given two mornings in succession, then omitted for three or four mornings.

One of the best drugs to kindle an appetite is one or two drops of tincture of nuxvomica one-half hour before each meal for one month. This dose is safe for a child of any age. Large doses should not be given without the direction of a physician.

Very nervous children, especially those having strenuous work at school, will do best by omitting school lessons, and being given a complete rest for a day or two in bed.

Many other children will regain their appetite by being given a change of air. A change from the city to the country or seashore or from the country to the city will stimulate the appetite.

A cold sponge-bath or cold shower, followed by a brisk rub, is one of the best appetizers.

THE DIET

A radical change in diet in which milk is omitted can be tried for two days. Or, if meat, eggs, and vegetables have formed the bulk of the diet, let the stomach rest by giving a teacupful of milk, but nothing else, three times a day. After three or four days we can gradually return to the former diet.

Vomiting

Vomiting is not always a sign of disease. If the stomach is very irritable, food may provoke a spasm which results in vomiting. In very nervous and sensitive children vomiting takes place easier than in the strong and robust child. Vomiting is usually due to a disordered stomach. It may also be due to swollen tonsils or may be caused by fright. As a rule, vomiting means the beginning of a disease. When a child strikes its head and has a concussion of the brain, vomiting results. Continued vomiting, as-

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sociated with fever, may mean the beginning of scarlet fever or brain disease.

Nervous Vomit

Habitual vomiting may be caused by a growth in the stomach. It may also be due to a nervous manifestation. The hysterical and sensitive child, especially if it is forced to eat food that it does not like, will throw it up. This form of vomit depends on the nervous mechanism of the child, and a case of this kind requires judgment and treatment of the whole nervous system rather than that of the stomach.

Vomiting is sometimes caused by acidosis. In this condition there is headache, fever and a sour breath resembling the odor of vinegar. The urine contains diacetic acid and acetone. These attacks may occur in the best of families, in children having excellent supervision. They are not caused by imprudence in feeding. If meat or eggs are the causative agents, stop them. Some

THE DIET

children may require a milk or vegetable diet for many months. If egg and meat proteins act as irritants, they must be omitted from the diet. Internally one-half teaspoonful or more of bicarbonate of soda three or four times a day will stop the attacks.

Chapter II

DISORDERS ARISING FROM IMPROPER NUTRITION

The Bowels

Supervision of the Bowels

It is better not to rely on the statement of any child regarding the bowels. No child up to the age of puberty is competent to describe a stool as to size, color, consistency, or quantity. The yellowish, pasty stool or the yellowish-white stool of infancy is changed to the brown, formed stool which should be passed in long-formed, sausage-like masses. Hard, round, and dry balls signify the absence of secretions from the liver, also the absence of intestinal glandular juices. These secretions are necessary to soften as well as lubricate the stool, thus keeping it in a semisolid consistency.

IMPROPER NUTRITION

Many stools contain particles of undigested vegetables and meats. This indicates lack of proper mastication. This has been mentioned in the article on Intestinal Indigestion.

When children eat too quickly and do not take time to properly masticate their food, they should be served with chopped or minced meats, purée of peas, potatoes, etc. Proper mastication can only be taught by constant and patient supervision. Some children of the nervous and overactive type do everything quickly, likewise they eat quickly, hence one must expect frequent dyspeptic attacks resulting therefrom. A dyspeptic stomach means dyspeptic stools.

Proper
Mastication

Constipation

The bowels must move at least once in twenty-four hours, otherwise the child is constipated. Health and development,

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which means growth, are dependent on the digestive tract.

The absorption of food necessary to sustain life takes place in the intestine, and the balance or residue must be passed from the body. If there is weakness of the intestinal muscles, or if there is an absence of intestinal glandular activity, the stool, instead of being soft, will be hard and dry, and will stagnate in the bowel. This stagnation causes headache, besides a distention of the abdomen.

Causes

Among the chief causes of constipation are insufficient exercise and dietetic errors. As a rule, mistakes in diet are responsible for 75 per cent of all cases of constipation.

To provoke a regular movement of the bowels we must have a regular system of feeding. If a child has taken a meal, he must be given sufficient time before partaking of the next meal to properly digest

IMPROPER NUTRITION

the previous meal. To overtax the stomach and overwork the glands weakens them, and consequently we overstrain the digestive tract by giving it more work than it can accomplish. Overeating and too frequent feeding, therefore, are the two chief causes of constipation.

Cakes, pies, puddings, pastries, and macaroni may all be eaten in moderation. They are nutritious, but if potatoes and large quantities of starchy food and bread are consumed, they must be aided by exercise and water, otherwise constipation will result. Many children will not take fruit, others eat too much candy, but such habits may not be permitted without detrimental result. Every child must eat vegetables, for their nutritious as well as laxative action. Kellogg's bran may be added to the cereals, or a teaspoonful of malt extract may be given with the food or after each

HEALTH-CARE OF THE GROWING CHILD

meal. Graham or corn-bread, bran-muffin, oatmeal with cream, and peach, apple, or prune purée will all stimulate the action of the bowel.

We should teach the child to use the toilet chair at a certain time of the day, preferably after breakfast. By this means the mind will aid in stimulating the bowel.

Diarrhea

When a child has more than three stools a day, they usually assume a liquid character. This is termed diarrhea.

The stools may be yellow or green, or they may contain traces of blood. As a rule, diarrhea is caused by a derangement of the stomach and bowels.

Among the most frequent causes is the eating of unripe or overripe fruit, improperly cooked, or partially decomposed foods, such as milk or fish that has not been kept

IMPROPER NUTRITION

on the ice, ice-cold water, or ice-cream when the stomach is overheated.

Disease germs present in any article of food will cause diarrhea. Water from a creek or pond, if polluted with sewage, will not only cause diarrhea, but may give rise to bloody stools (dysentery).

From what has been said, we can see that diarrhea is usually caused by the introduction of disease germs in food which set up an inflammatory process in the stomach and intestine. This inflammation results in the discharge of loose, watery, or mucous stools. There are other reasons for diarrhea; for example, by plunging the feet in cold water and wading too long at the seashore, many children suffer with colic, and later on loose bowels. Many cases of diarrhea are preceded by colic or cramps in the abdomen. Besides the liquid stools, there is also a great deal of flatulence. As

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a rule, exhaustion and prostration follow loose bowels, and if the diarrhea continues longer than one day, the child should be kept quiet on the bed or couch, so that walking and all exercise is avoided. Especially must the child be kept in bed if the temperature is over 100 degrees.

In a neighborhood wherein typhoid fever has occurred, we should call a physician at the first sign of diarrhea, as typhoid frequently begins in this manner.

Diarrhea is frequently brought on when the bulk of the food has been liquid rather than solid. If milk, soup, broth, tea, and orange juice have been consumed during the day, very little solid stool will be passed. If, on the other hand, bread, cake, potatoes, meat, and eggs were the chief articles of food, then liquid stools should not be expected unless the food is of an irritating character or has stagnated in the intestines,

IMPROPER NUTRITION

producing decomposition with gaseous fermentation resulting in explosive stools.

In every case of diarrhea, whole milk **Treatment** should be stopped and skimmed milk given. Such skimmed milk must be boiled before using. Weak tea, rice steamed in water and flavored with cinnamon, farina, tapioca, and corn-starch pudding may be given. Arrowroot pudding is valuable, and toast made of stale bread may be given. Fresh bread should not be permitted. Mutton broth, thickened with rice or barley, is required. Fruit should not be given. Water should be boiled and given sparingly. All vegetables excepting carrots may be given in moderation.

A tablespoonful of castor-oil should be given at the first sign of diarrhea. Two hours later the bowels should be washed with one quart of warm water, to which one heaping teaspoonful of bicarbonate of **Soda Injection**

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soda has been added. When giving this injection the child should be placed on the left side and the irrigation given with the fountain-syringe held no higher than two feet over the child's body. By this means we avoid using too much pressure.

One tablespoonful of lime-water should be added to each feeding of skimmed milk, so that two or three tablespoonfuls of lime-water may be given during the day. Give one teaspoonful of chalk mixture, well shaken, every hour for six doses, to a child of from five to fifteen years. If the diarrhea does not improve after the above treatment a physician should be called.

When a child has repeated attacks of diarrhea during the year, a subnormal condition exists, which can be improved by toning up the system. A tonic of iron may be required.

IMPROPER NUTRITION

Colic or Cramps

Cramps in the stomach and bowels are frequently caused by eating unripe fruit or food which is iced. Very fatty food is sometimes responsible for attacks of colic. These attacks consist of pain and rumbling in the abdomen due to gas. They are usually followed by loose bowels. The discharges frequently contain mucus. The temperature of the child should be taken to see whether or not fever is present. Attacks of colic, if following a meal of unripe fruit or too fatty food, require a tablespoonful of castor-oil to cleanse the intestinal tract. A pinch of calcined magnesia, in water, after each meal will frequently prevent recurring attacks.

Immediate relief can be afforded by the application of a hot-water bag and by giving one-half teacupful of warm water to which five drops of essence of peppermint

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have been added. An injection of one-half pint of warm camomile tea is soothing, and will aid in the expulsion of gas and undigested fecal matter. If an attack of colic occurs and we are sure it is not caused by an indiscretion of diet, a physician should be called to determine the origin of the same.

Intestinal Indigestion

In intestinal indigestion we find undigested particles of food in the stool. There is a loss of appetite. The child is languid, complains of headache, and sometimes of pain in the arms and legs. Overfed children, and those suffering repeated attacks of gastric and gastro-intestinal disorder, are more likely to have intestinal indigestion. As the food is not properly assimilated, the child passes a large quantity of undigested particles of food. This deprives the child

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of strength and results in a lowering of the vitality.

Long-continued attacks of intestinal indigestion produce loss of weight. The blood being deprived of nutrition, shows anemia. Thus, children suffering with intestinal indigestion are extremely pale. Their ears are yellowish-white, and there is an absence of the healthy ruddy color so natural to child-life.

In addition to the feeding of improper food, both quantity and quality, there is usually bad hygiene at the bottom of the trouble. Cause

Children who are forced to study too hard and are deprived of exercise and open-air activities usually suffer with intestinal indigestion. Oxygen is demanded for the nutrition of the red-blood corpuscles, and if foul air in classrooms or in bedrooms is substituted for pure fresh air, the peptic

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glands and the intestinal glands being robbed of their vitality, can not perform their normal work, and as a result the food is deprived of secretions which are necessary for its digestion and assimilation.

Treatment

To modify this condition the following plan is suggested. If meat has been permitted, it should be minced and then thoroughly masticated, so that saliva is incorporated with the food. Children frequently bolt their food, and until this habit is broken they should have all their vegetables mashed. We can give purée of lima beans, winter beans, peas, and potatoes, so that large quantities of food do not enter the stomach. Coddled eggs, junket, pot-cheese, and custards may be permitted, whereas pies, cakes, and iced foods should be prohibited. Ice-cream and water-ice are especially harmful if given immediately after a meal, as they interfere with digestion.

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Medication especially intended for this condition must be ordered for each individual case by a physician.

Rickets

Rickets is a weakened or faulty condition of the bones and teeth caused by improper feeding or by poor assimilation of food. Faulty hygiene, resulting from want of fresh air, with closed windows at night, may cause rickets. Bolters who eat quickly, do not chew well, and digest badly, usually develop rickets. Rickets may affect the spine, the ribs, the arms, the legs, or the bones of the skull, so that any part of the body may show a structural weakness.

The teeth are brittle, chalky, and decay easily. The muscles are flabby and lose their tone. It is for this reason that we usually have constipation present. Rachitic children are usually backward in talking

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and backward in walking. The soft bones yield on walking, thus causing bowlegs. These children are very susceptible to diseases. They have an especial tendency to adenoids and enlarged tonsils. A rachitic child should be hardened and protected, because of a tendency to tuberculosis in later life.

To harden a child, in addition to hygienic measures previously described, necessitates giving it food which is easily assimilated. Food which will build the bones and strengthen the muscles. Cereals, such as oatmeal, cornmeal, wheaten, rice, and barley, are bone-builders. Yolk of egg should be added to these cereals. Meat and vegetables may be given liberally. Vegetables should be given twice a day.

To assimilate food properly, children should be fed at regular intervals, with nothing between meals. If practicable and



Rickets resulting from incorrect feeding. The faulty chest development is due to imperfect respiration caused by the presence of adenoids.

IMPROPER NUTRITION

possible, the child should be permitted to sleep out of doors and hardened in this manner. Do not give cathartics continuously; they are weakening. Rely on diet, principally, to modify constipation.

Weak Ankles

Weak ankles are caused by weakness in the ligaments of the joints, or they may be an association of rickets in which soft bones and flabby muscles exist. Dyspeptic manifestations during infancy and childhood lay the foundation for this condition.

Exercise and proper diet will build up the ankles to a normal condition. Cereals, eggs, meat, and vegetables should form the principal part of the diet; cakes, pies, and puddings should be given but sparingly.

Children suffering with weak ankles should not be deprived of exercise such as roller-skating, ice-skating, or bicycle-

HEALTH-CARE OF THE GROWING CHILD

riding. These exercises must, however, be taken in moderation, and at the first sign of fatigue or turning of the ankle, rest must



FIG. 21.



FIG. 22.



FIG. 23.

These illustrations, taken from Florence Bolton's *Exercises for Women*, published by Funk & Wagnalls Company, are well worth studying.

FIG. 21.—A common sight—the ankles bulging inward under the weight of the body.

FIG. 22.—A front view of Fig. 21. "Toeing out" has lengthened the inner line of the foot and allowed the bodyweight to fall to that side, pressing down the arch.

FIG. 23.—A normal springy step. Notice that the weight falls on the outer side of the foot and that the line of action is straightforward.

be enforced. The period between fatigue will gradually lengthen until the child can remain on skates or wheels an hour or longer.

IMPROPER NUTRITION

Crooked or run-down heels are not always a sign of weak ankles, but more frequently result from the faulty use or position of the feet in walking.

Scurvy

When children are deprived of fresh meat, fresh vegetables, and fresh milk, and fed on condensed milk and canned goods for a very long time, scurvy may result.

The body requires a live factor which is present in raw milk and which disappears when the milk is boiled or preserved. Scurvy shows itself by spongy gums with tendency to bleed. The stools will be soft and frequently contain streaks of mucus and blood. There are tendencies to hemorrhage in various parts of the body, due to frail blood-vessels.

There is no danger in giving an occasional meal of canned or preserved food of

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standard quality, but if we deprive the child of all fresh foods, such as raw milk, orange juice, steak juice, and raw white of egg, scurvy may result.

Cases of scurvy should always be placed under the treatment of a physician, as advanced cases may have chronic symptoms which would pass unobserved by the average mother. If properly treated, scurvy will leave no after-effects.

PART III

CATARRHAL, COMMUNICABLE, AND
SYSTEMIC DISEASES

Chapter I

CATARRHAL DISEASES

The Throat

To examine the throat, we should take the child in a good light, near the window, and depress the tongue with the handle of a spoon.

Normal
Appearance of
the Throat

Hanging over the root of the tongue is the soft palate, and on either side of the palate we have the tonsils. These, if swollen, are ragged, beanlike projections, pinkish in color.

The back of the throat, if healthy, presents a pinkish color; this can always be distinguished from the bluish-red and dry appearance of the throat during an inflammation.

It is a good plan to inspect the throat

HEALTH-CARE OF THE GROWING CHILD

of a healthy child frequently, so as to familiarize one's self with the appearance of the same in health, and at the same time teach the child not to fear the examination.

The throat is the source of more trouble in the growing child than any other part of the body, therefore it pays to carefully inspect it many times in order to recognize patches or swellings when they occur.

When a child refuses to eat, one of the first things to do is to inspect the throat, as all dust and disease germs are inhaled through the mouth and nose. When children are indisposed and appear languid, the mother should inspect the throat. She will be able to see the beginning of inflammation in the throat, if present, and can thereby locate the trouble very early.

Loss of appetite is in many cases believed to be due to a spoiled stomach, when in reality an inflammation in the throat is re-

CATARRHAL DISEASES

sponsible for the trouble. Frequently children five to six years old, and sometimes eight to ten years old, may complain of headache, when the trouble really is in the tonsil. This is important to know, because fifty per cent of cases of fever in children begin with a sore throat and loss of appetite.

Adenoids

Adenoid vegetations are small wartlike masses varying in size from one-quarter to one inch in length. They are found at the back of the nose and throat. Their growth and enlargement depend on the presence of catarrh.

Some children have a tendency to adenoid formation. This tendency is found in the child with rickets, or with syphilis, and in the glandular type of child.

In catarrhal families, where bronchitis, tonsillitis, and frequent colds and coughs

HEALTH-CARE OF THE GROWING CHILD

are found, most if not all children develop adenoids. There are hundreds of children with small adenoids that go through life without any evidence of the same. But the presence of adenoids may be suspected if the child suffers with frequent attacks of running nose, loss of appetite, and restlessness.

Mouth Breathing

The most important symptoms are mouth-breathing, snoring, and occasionally bed-wetting. If adenoids are permitted to grow, they can block the back of the nose so that they interfere with breathing; therefore, an adenoid child uses its mouth instead of its nose for respiration. Nature gave us the nose through which to breathe, but also to filter the dust from the air on its way to the throat. Many disease germs when inhaled through the nose are not as dangerous as when they enter through the mouth.



Adenoid Faces. A group of school children suffering with adenoids. They show the typical nose and mouth expression. Photograph received through the courtesy of the Health Department, New York City.



CATARRHAL DISEASES

Long-standing adenoids will produce a deformity of the upper jaw and push the jaw forward so that the upper teeth protrude far beyond the lower teeth.

The nose has a peculiar pinched expression, and physicians speak of the facial expression as the "adenoid habitus." That there is extreme danger in the nonremoval of adenoids can be seen by the fact that the majority of sufferers from scarlet fever, diphtheria, and recurring croup, are those in which enlarged tonsils and adenoid vegetations are found.

We can safely say that the presence of adenoids invites contagious diseases, because adenoids as well as tonsils will harbor disease germs, and give them a soil for their propagation.

In addition to inviting disease, adenoids, **Deafness** if obstructing the Eustachian tube in the throat, can cause deafness. Such deafness

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can fortunately be cured by the removal of the adenoids.

Adenoid vegetations are usually the result of recurring colds in the head; they are, however, occasionally found in the newly born, so that pre-natal tendencies do exist.

When adenoids exist in an otherwise healthy throat they may not give rise to any disturbing symptoms. When, on the other hand, the child suffers with fever or catarrh, then adenoids will swell, as they frequently do in damp weather, and give rise to symptoms. These symptoms are nasal obstruction, caused by catarrhal discharges, interference with breathing, and, at night, snoring.

Adenoids
cause Ear
Discharge

Adenoid vegetations are frequently responsible for long-continued ear discharges. When a running ear will not yield to the routine methods of syringing and general

CATARRHAL DISEASES

building up of the system, the cause may be looked for somewhere in the vault of the pharynx. Very frequently the removal of a small adenoid growth will aid in stopping a discharging ear.

Many cases of restlessness at night are due to the presence of adenoids. Many children are dosed with useless worm medicines when adenoids are the cause of the grinding teeth and insomnia.

Every now and then a case of bed-wetting Bed-wetting will be seen that is due to a reflex disturbance wherein adenoids are the cause. Pigeon-breasted children have this deformity of the chest in many instances due to a long-delayed operation.

The adenoids prevent the proper amount of fresh air reaching the lungs, and by thus interfering with the respirations, the deformity of the chest is gradually developed until it remains permanent.

HEALTH-CARE OF THE GROWING CHILD

From what has been said it will be seen that the presence of adenoids in a growing child is a great menace, the removal of the same a great benefit.

In the public schools, teachers have long since recognized the association between mental backwardness and adenoids. The dumbest pupils in the classroom are usually sufferers from adenoids. These are the reasons why the health department of every large cosmopolitan city all over the country, also educators, recognize the danger of adenoid vegetations among school-children, and have urged parents for years to have these growths removed. They interfere with both the physical and mental development of the child.

Tonsillitis

In this condition, when the throat is examined, yellowish or yellowish-white dots,

CATARRHAL DISEASES

pin-point or larger in size, and looking like droplets of cream, on one or both sides of the throat, will be seen. (See frontispiece.)

There is always fever present. In the beginning it may be only 102 degrees, but later reach 103 or even 105 degrees. These fever attacks are accompanied by a tired feeling, with muscular pains and extreme thirst. Some children are drowsy and do not wish to be disturbed. The fever and the poison from the tonsils disturb the internal secretions, and constipation of a most obstinate character frequently accompanies the same. Headache and vomiting may also be present. The examination of the throat in addition to the spots above mentioned shows redness, and the parts will be dry and shiny. There is a sour odor to the breath. The tongue will be correspondingly dry. The physician should be called because of the danger of complications.

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Until the physician can be reached, one pint of soapwater should be injected into the bowel. This will always reduce the temperature, relieve the headache, and brighten the child.

To quench thirst, reduce the temperature, and stimulate the kidneys, a wineglassful of citrate of magnesia should be given every hour for six hours.

It is a good plan to investigate the origin of every case of tonsillitis and find out at school or among friends if the child has been exposed to diphtheria. There are many points of difference in the two diseases which will be described in the chapter on diphtheria.

Rhinitis, or Cold in the Head

Catarrh

Rhinitis means catarrh in the head with running nose. Sneezing is usually present. As a rule, when children have frequent re-

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curring colds in the head, we find the throat to be the seat of the trouble. Adenoids concealed somewhere in the back of the nose will swell like a moistened sponge and give off a continuous discharge of a yellowish or yellowish-white color, or diseased tonsils will carry millions of germs. The condition is found in children who are not in a normal state of health. When the body is weakened, the blood is thinner and the circulation is poorer. The hands and feet, instead of being warm, are cold. The slightest chilling of the surface of the skin by changing to light clothing or thinner underwear is usually followed by a running nose, or by sneezing, and symptoms commonly called a cold in the head.

Active exercises followed by perspiration, unless properly checked, will result in a cold in the head.

Recurring colds can be improved, but not

HEALTH-CARE OF THE GROWING CHILD

cured, by using sprays or inhalations, or any of the rhinitis drugs, such as aspirin, phenacetin, or salol.

To cure this catarrh permanently, we must have the adenoids scraped away; then the discharge will stop.

A cold in the head, resembling rhinitis, with sneezing and coughing, may be the beginning of measles. It is safer to put the child to bed for one day, or until the nature of the cold is determined. Very frequently an innocent-looking catarrh in the head, with running nose, marks the beginning of diphtheria of the nose.

Blood Test

Syphilis, if the cause of rhinitis, can only be determined by an examination of the blood. If we are suspicious that catarrh is inherited from either parent, then a Wassermann blood-test should be made—this will determine positively whether or no the child has a syphilitic catarrh.

CATARRHAL DISEASES

Coughs

A cough means an irritation. Phlegm in the back of the throat may cause a tickling and irritation until expectoration clears the same. Swollen tonsils or swollen adenoids give off a discharge which causes a cough. A cough due to adenoids or tonsils appears when the child lies on its back; therefore, a night cough is suggestive of the presence of adenoids. Not all night coughs, however, are caused by adenoids. In the beginning of a whooping-cough, before the whoop appears, the child will cough mostly at night. The cough will also be stronger at night. The cough associated with whooping-cough, as also the cough due to adenoids, is not accompanied by fever. This point is important to remember, especially when an irritating cough exists and continues for many weeks.

The cough associated with influenza or the

HEALTH-CARE OF THE GROWING CHILD

Due to Pleurisy

cough associated with bronchitis is always accompanied by fever. The fever may reach 100 degrees in the morning and 102 degrees at night. A cough similar to a bronchial cough, but usually accompanied by pain on one or both sides of the chest, is due to pleurisy. The little patient will instinctively place his hand over the painful spot on the side of the chest to relieve the pain produced by coughing, and will always lie on the affected side. In pleurisy there is rarely any expectoration, but a great deal of cough. The cough caused by a continued bronchitis or pleurisy will, if prolonged, cause a loss in weight. I shall refer to the treatment of these coughs in the special articles pertaining to diseases later on.

If the child has a cough and loses weight, and if there is fever accompanying the same, a physician should be called, so that the nature of the cough can be established.

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Tuberculosis frequently has a cough and a slight fever which resembles pleurisy, and it would be very serious to neglect the beginning of a tuberculosis, because the chances of a cure are greater in the beginning of every disease. My advice, therefore, is to consult a physician the moment a cough is accompanied by fever, until the true nature of the disease is established.

Due to
Tuberculosis

Chapter II

COMMUNICABLE DISEASES

How Conta-
gious Diseases
are Spread

DIPHTHERIA, measles, and scarlet fever—in fact, all contagious diseases—are spread by contact with discharges containing the germs.

Convalescents who have living disease germs in the throat or nasal discharges can communicate the disease through these discharges. Ear discharges and vaginal discharges during the course of scarlet fever assume malignancy, and frequently transmit the disease thereby.

“Carrier”

The most frequent means of dissemination of disease is through carriers. A “carrier” is a person who has had an infectious disease from which he is apparently cured, but who still carries the disease germs capa-

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ble of transmitting such disease to healthy people. Many people may carry disease germs in their nose and throat for months after the active symptoms of the disease have subsided.

To determine the existence of disease germs after convalescence from scarlet fever, and especially diphtheria, a culture should be taken from the discharges of the nose and throat. In suspected typhoid fever a culture taken from the stool will quickly determine the presence or absence of such disease germs.

Another means of conveying the disease is by the fingers of a person nursing a patient. Unless the nurse is instructed in the necessity of washing her fingers immediately after each handling of the patient, she may be the means of carrying the disease to healthy persons. If we permit a healthy child to drink from a glass or use

Direct
Contact

HEALTH-CARE OF THE GROWING CHILD

Disinfection

a spoon immediately after a sick child has used it, disease germs can be directly conveyed to the healthy child. This proves the necessity for keeping all utensils separated, and more especially the need of washing them before they are used by others. Clothing should be thoroughly cleaned, underwear should be boiled and washed, and when thoroughly aired need not be feared. Disease germs die quickly when exposed to the air. No one need fear contracting a contagious disease by using clothing after the same has been cleaned and aired. Chemical disinfection of clothing and bedding has been abandoned.

Insects, such as flies, mosquitoes, and bugs, especially bedbugs, carry disease. These insects come in direct contact by crawling over the body, and so carry disease germs directly from person to person. During illness all food should be carefully

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covered to guard against insect contamination. Windows and doors should be screened to keep insects, and especially flies, out of the house.

Affection bestowed by a kiss in the im- Kissing
mediate family is not harmful, nor is it harmful providing we are sure that there is no one ill with influenza, diphtheria, or pneumonia, as these germs are found in the saliva.

Indiscriminate kissing by the nursemaid and by strangers is always risky, and must be condemned. Our present knowledge of the contagion of disease, and the ease with which disease is communicated from mouth to mouth, should render thoughtful parents cautious in regard to kissing.

Syphilis can be conveyed by an innocent kiss. We should prevent children, especially at school, from getting the habit which some day may prove disastrous.

COMMUNICABLE DISEASES.

Disease.	Symptoms Begin After Exposure.	Characteristic Symptoms.	Other Symptoms.	Complications and Sequelæ.	Duration of Disease.	Isolation.
Influenza.	1 to 3 days.	Fever, coryza, bronchial, gastroenteric symptoms, at times cerebral symptoms — or stupor — with muscular twitching.	Crying as if in pain.	Lungs. Kidneys. Intestines. Nervous system.	About 1 week.	2 weeks.
Measles,	8 to 14 days.	Enanthem on Buccal Mucous-membrane. Dusky or purplish red, slightly elevated spots, crescent-grouped, seen on face first.	Begins with cold in head, running eyes, cough, eruption on fourth day. High fever.	Eye. Lung (empyema) Tuberculosis. Ear (mastoid). Heart.	3 to 7 days.	2 to 3 weeks.
German Measles.	1 to 3 weeks.	Pale rose red spots or blush, not grouped, fades rapidly.	Slight fever, eruption on first day.	Rare.	About 1 week.	2 weeks.
Scarlet Fever.	1 to 8 days.	Intense bright red blush over body beginning on chest.	Sore throat, vomiting, high fever, eruption first or second day.	Kidney. Ear. Heart.	Little over 4 weeks.	6 weeks.
Chicken Pox.	2 to 3 weeks.	Pea-sized vesicles filled with water fluid.	Slight fever, eruption first day.	Rare.	About 1 week.	2 to 3 weeks.
Diphtheria.	2 to 10 days.	White or grayish-white membrane on tonsils or pharynx.	Sore throat, weakness, fever. Pain on swallowing. Older children complain of headache.	Lungs. Heart. Kidneys. Ears. Brain. Paralysis.	1 to 2 weeks.	3 to 4 weeks.
Whooping Cough.	2 to 7 days.	A long paroxysm of coughing followed by the crowing whoop at the end, frequently ending in vomiting.	Cough during first week of infection resembles bronchitis. Characteristic cough, often not seen until second week. Vomiting.	Heart. Bowel. Hemorrhages.	6 to 8 weeks.	As long as the whoop lasts.
Mumps.	1 to 3 weeks.	Glandular swelling below one or both ears, under the jaw.	Pain on chewing, inability to swallow.	Orchitis. Abscess.	About 1 week.	3 to 4 weeks.
Typhoid Fever.	5 to 14 days.	Rose-colored, lenticular-shaped spots appear at the beginning of the second week. Eruption lasts 6 to 10 days. Fever, step-ladder type.	Diarrhea or constipation. Sometimes convulsions. Enlarged spleen. Thirst. Prostration. Delirium.	Blood. Lungs. Heart. Peritoneum.	21 days.

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Influenza

Catarrhal
Type

The influenza germ does not always affect the same part of the body. When it affects the organs of respiration it is known as the catarrhal type. This begins with symptoms resembling a cold in the head, sneezing, inflamed eyes and nostrils, and a general lassitude. The child does not care to play, has no appetite, coughs occasionally, and the temperature ranges between 100 and 101 degrees on the first day. This is the time to prevent the disease from spreading. If the child is put to bed and given a strong mustard foot bath, and then wrapped in warm blankets until perspiration results, the disease can frequently be cut short. One-half teaspoonful Rochelle salts should be given, in several teaspoonfuls of water, every hour until the bowels act freely. The lightest broth, and milk diluted with vichy may be given, alternately, every four hours. If the cough continues and fever rises to 103 or 104 degrees pneumonia is developing.

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Gastric Type

Influenza frequently attacks the stomach and bowels. We then have the child suddenly taken ill with vomiting, loss of appetite, loose bowels and fever. Prostration, weakness, and intense thirst accompanies this type. These attacks appear suddenly in spite of a correct diet. One-half teaspoonful of bicarbonate of soda should be given in several teaspoonfuls of warm water, and repeated every half-hour. Even though vomiting continues the bicarbonate of soda will have an excellent effect on the stomach. An ice cold cloth or towel should be applied over the abdomen and changed every hour until the vomiting stops. A high enema of two teaspoonfuls of bicarbonate of soda to two pints of warm water, is an excellent remedy and cleanses the intestines. Repeat this once every six hours. The physician should be consulted if the fever rises above 101 degrees.

Meningeal Type

The most serious type of influenza and the one fatal in infancy and childhood is the meningeal type. This is also known as the

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toxic type of the disease and is accompanied by rigidity of the muscles, convulsions, stiffness of the neck, and general twitching. It may also be accompanied by an unconscious state in which the child can be roused for food and then lapses into unconsciousness. This type is known as the sleeping sickness or lethargic encephalitis. It is a prolonged agony extending over many weeks and ending fatally.

Bronchitis

Bronchitis is a catarrhal affection of the bronchial tubes, and begins with a cold in the head. The air-tubes in the upper portion of the lungs are very susceptible to catarrhal inflammation. Catarrh germs enter the nose and throat and set up an inflammation which extends from the throat downward to the bronchial tubes. There is usually a slight rise in the temperature, the fever will range between 100 degrees in the morning and 102 degrees in the evening. If

Fever

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the bronchitis is associated with influenza the duration may be several weeks. Bronchitis should not be neglected. Unless the bodily strength is restored with the aid of tonics, loss of weight may occur. In many cases the tendency to ignore a bronchitis and to trust to nature should be condemned.

Neglected Cases

Neglected cases of bronchitis lay the foundation for repeated attacks, and result in chronic bronchitis. Neglected cases are also a favorable soil for the development of tuberculosis, and this is really what we must guard against.

Bronchitis is usually associated with measles; it may also follow influenza. No matter how mild the case, it is better to have the lungs carefully examined by a physician and have a correct plan of treatment outlined.

Treatment

There is a vast difference in treating a case of bronchitis in the city or in the coun-

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try. Dust and dirt and changeable climate are factors that provoke irritation and keep up an active bronchial catarrh. It is therefore advisable to change from the city to the country, preferably to a higher altitude. An altitude of 1,000 to 1,500 feet, for several weeks, will relieve the catarrhal inflammation of a bronchitis, besides giving the child a better appetite and aiding in the digestion of food.

Sleep is an important factor, and the disturbance of sleep caused by continued coughing should be remedied. Antispasmodics, such as belladonna, will soothe the mucous membrane, dry the secretions, and thereby promote sleep. It is self-understood that all drugs must be ordered by a physician.

If a cough-mixture or an inhalation is ordered, and the child happens to fall asleep, do not disturb it—wait until it awakens. The habit of rousing a child out of a sound

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sleep is vicious and cannot be too strongly condemned. Nature demands sleep to repair waste, and it may be necessary to give small doses of drugs to assist nature now and then in promoting sleep. This applies to sick children only.

Bronchial Asthma

Recurring attacks of bronchitis, with wheezing heard over the front and the back of the chest, are known as bronchial asthma. One of the reasons for this wheezing and difficulty in breathing is due to a swelling of the inside lining of the bronchial tubes. This swelling renders the entrance of air more difficult; as a result there is an imperfect oxygenation of the lungs. The blood suffering from this loss of oxygen is shown in a bluish color of the body, especially of the lips and finger-nails. There is cough and difficulty in breathing, but lit-

Wheezing

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tle or no expectoration. As a rule, there is a slight fever, but rarely higher than from 100 to 101 degrees.

These attacks of asthma usually owe their origin to some albuminous food which causes this disturbance, resulting in spasmodic attacks of the bronchial tubes.

Some children will have recurring asthmatic attacks after eating eggs. Other children have a sensitive reaction to cereals. If once the reason for the attack has been definitely determined, the recurrence of the same can be avoided.

We do not look upon asthma as due to a cold, although chilling the surface of the body when overheated will render sensitive children more liable to attacks.

For the relief of bronchial asthma, cupping of the chest is beneficial. The bowels should be kept loose. Kitchen odors and tobacco smoke must be avoided.

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Fresh air is of prime importance. The windows must be open night and day, summer and winter. During the attacks, no solid food should be given. Small doses of calomel will relieve the congestion of the liver and the lungs, and may be given in doses of one-tenth grain every ten minutes for ten doses, after which a teaspoonful of rhubarb and soda mixture may be given every hour for three doses.

Pneumonia

Broncho-
pneumonia

There are three kinds of pneumonia—bronchopneumonia, lobar pneumonia, and tuberculous pneumonia.

During the winter months, a cold in the head or influenza may last several weeks. The body loses strength, and there is a continued fever. If the child is not kept in bed until the fever subsides, the influenza bacillus or the pneumonia bacillus will extend

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from the nose and throat to the bronchial tubes, terminating in bronchopneumonia.

Bronchopneumonia usually follows measles, scarlet fever, or diphtheria. It is therefore the form of pneumonia that associates itself with an already weakened system. There is consequently a certain element of danger in this form of pneumonia.

The condition usually lasts several weeks, but it may last months. It does not terminate by a crisis, as does lobar pneumonia, which will be described later. The temperature may range between 100 and 101 degrees in the morning to 104 or even 105 degrees in the evening. There is cough of a distressing character. There is very little expectoration. The appetite is poor, the bowels sluggish. The child perspires freely. There is loss of weight, due to the catarrh, the continuous fever, and lack of assimilation of nutrition.

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In some cases the disease may extend from one portion of the lung to another. Not infrequently both lungs may be involved, so that bronchopneumonia will be found on both sides of the chest, and in the upper as well as the lower lobes.

The outcome of a case of bronchopneumonia depends on the amount of lung inflamed. It also depends on whether or no the child has rickets. The exhaustion due to the prolonged fever demands not only concentrated food, but also stimulation. The heart must be strengthened during the course of the disease. In many cases it is imperative to add whisky to the milk and egg to stimulate the circulation. Parents should never object to the use of alcoholic stimulation when ordered by a physician, for thereby the life of the child may be saved.

Alcoholic
Stimulation

The treatment of this disease requires

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the careful judgment of a physician, and no mother or nurse should undertake the responsibility of treating the child without the supervision of a physician.

The danger-point in bronchopneumonia consists in the weakness which may follow continuous fever, and this is first shown by the weakness of the heart action. The heart therefore needs watching. Such cases occasionally terminate in lung abscess, and where rickets exist, bronchopneumonia may terminate in tuberculosis. To prevent such complication the physician must pilot the case carefully from the beginning.

As to the open-air method of treatment, children of robust constitution can tolerate cold air treatment. If, however, the circulation is poor, extremities cold, fingers, toes, and face bluish instead of pink, then warmth will do more good than the open-air treatment. Cold air exhilarates many children,

Cold Air
Treatment

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but it depresses those whose circulation is poor, and especially children heretofore unaccustomed to it.

Lobar Pneumonia

Lobar pneumonia receives its name from the fact that one portion or lobe of the lung is inflamed. It usually is found associated with influenza, or mid-winter bronchitis.

Expectoration

A sudden chill, followed by a very high temperature, such as 103 to 105 degrees, marks the beginning of an attack. Children complain of pain on breathing, of a stitch in the side. There is marked shortness of breath, considerable cough, but rarely much expectoration. If there is any expectoration, it is of a reddish or brownish color, and is known as "prune-juice" expectoration. This form of expectoration is characteristic of this type of pneumonia, and usually lasts from four to seven days, rarely longer.

Just as we have a sudden rise in temper-

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ature at the beginning of this disease, so do we have a characteristic drop from 105 degrees to normal, between the seventh and ninth days of the illness. This is known as the "crisis." When this crisis occurs the child must be carefully protected against exposure. We must not believe that, because the temperature is normal, all will go well. The heart-action and the pulse are better guides in estimating the true condition of the child.

Long after the physician has discontinued treatment the mother or nurse should remember the severe strain to which the heart has been subjected, and if possible the child should be taken to the mountains or seashore for a change of air which will strengthen the lungs.

Exercise which tends to exhaustion must not be permitted.

Lung gymnastics by deep inspiration and

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Lung Gymnastics

expiration should be ordered every morning and evening. At least a dozen long breaths should be taken, and this should be done after thorough ventilation of the room. This exercise will not only develop the lung but will give the blood more oxygen. It is therefore like giving a lung-tonic.

Tuberculous Pneumonia

Tuberculous pneumonia is a form of chronic inflammation in the lung in which there is associated tuberculosis. Children with pigeon-breast and flat chest, especially those with enlarged glands possessing very little vitality, are more liable to develop this form of pneumonia than robust children of good chest and lung development.

When whooping-cough is neglected, and is a long-drawn out disease, we occasionally have tuberculous pneumonia as a complication. When tuberculosis exists in a family and there is carelessness with expectoration, or kissing by a tuberculous father or

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mother, or if milk from a diseased (tuberculous) cow is fed, the tuberculosis germ can be carried into the body and thus set up tuberculous pneumonia.

A child having tuberculous pneumonia has no chance to recover in a crowded city. It must be removed to the country for open-air treatment. Many of these cases offer little hope if the disease has progressed many months, with continuous loss of weight. Our only hope lies in giving such a child tonic treatment, such as arsenic or nux vomica to restore tone to the digestive tract, in addition to an outdoor life.

Tuberculosis

Tuberculosis is a disease caused by the tubercle-bacillus which enters the mouth or nose by inhalation or by means of food. If the food contains the tubercle-bacillus the intestinal type of tuberculosis usually de-

HEALTH-CARE OF THE GROWING CHILD

velops. In some cases the germs lodge in the back of the throat and penetrate the glands of the neck, causing glandular tuberculosis.

Milk and butter are frequently the vehicles that convey tuberculosis-germs; this applies to raw milk only. For this very reason physicians have for years advised the pasteurization or sterilization of milk, because by this means disease-germs are killed. When certified milk from inspected cows is received we are dealing with safe milk, and such milk only may be consumed in its raw state. What has previously been mentioned concerning the danger of ordinary market-milk applies to milk of unknown dairies. In such dairies if a milker has tuberculosis he can convey, by coughing, thousands of tuberculosis-germs to the milk. Another danger is that of the cow itself. The disease known as bovine tuber-

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culosis is very common among cows, and if the udder is diseased the milk is contaminated during the milking process. Ulcers and discharges in and around the udder are a source of danger to milk.

Bovine
Tuberculosis

In a debilitated child, such as one that is weakened from a prolonged attack of whooping-cough, chronic bronchitis, pneumonia, or pleurisy, the danger of developing tuberculosis is readily understood. If the body is weakened it becomes a suitable soil for the development of the seed more easily than if the body is strong and healthy.

Tuberculosis in childhood is curable provided strict attention is given to modern methods of treatment. The treatment of gland-tuberculosis as well as the treatment of bone-tuberculosis consists in the surgical removal of the affected glands or bone. Do not misunderstand me. All gland- or bone-cases do not need surgical treatment. Many

Gland
Tuberculosis

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Heliotherapy

of these cases can, with excellent hygiene and good food, be built up so as to throw off the disease and regain perfect health. The most important part of the treatment consists in giving the patient the benefit of heliotherapy. This consists in living permanently at a slight altitude in the mountains and having windows open night and day, and exposing the body to the sun's rays. If it is not feasible to remove the child from its home to the mountains for the above outlined treatment, the next best thing is to take it to the seashore where the same plan of outdoor life, sun-baths, and in selected cases, sea-baths may be given.

Dietetic Treatment

Milk with yolk of egg, buttermilk, cheese, vegetables, meat, and fruits should form the bulk of the diet. Whereas an interval of five hours between meals should be allowed, a glass of milk, cocoa, or malted milk may be permitted between meals.

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Chronic bronchial coughs, especially if the body loses weight, should be regarded with suspicion. If fever is present in the evening and the child perspires, the sputum should be examined for the presence of the tubercle-bacillus. Many diseases have symptoms similar to tuberculosis. In malarial Empyema fever the symptoms resemble those of tuberculosis, but the blood-test can determine the presence or absence of the malarial germ.

An abscess in the lung, so-called empyema, gives symptoms similar to tuberculosis. Because of the similarity of symptoms in various diseases and the difficulty in identifying tuberculosis, when no expectoration is present, we are compelled at times to wait several weeks until a positive diagnosis can be made. If expectoration is present, the presence of the tubercle-bacillus in the same will complete the diagnosis.

The diagnosis of brain-tuberculosis is

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Brain-Tuberculosis

most easily made by drawing off a small quantity of the spinal fluid and testing the same for the presence of the tubercle-bacillus.

Treatment

Many years ago tuberculosis was regarded as a fatal disease, and every patient who suffered with tuberculosis was regarded as doomed. Modern science has recognized the necessity of taking all cases of tuberculosis out of their bedrooms and warm blankets and placing them in hammocks or open-air shacks, or on balconies and giving them a liberal supply of fresh air and sunlight. The sun's rays are the best disinfectants. This is recognized by the various Health Departments who, instead of using formalin and sulfur disinfection, now resort to fresh air and sunlight to kill germs. Sirups, foul-smelling creosote, and carbolic sprays to disinfect the air-passages have been discarded as useless.

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The treatment now consists in disinfecting the lungs with continuous fresh air, placing the patient in a sun-bath, keeping the skin, bowels, and kidneys free, clean, and active, aiding nature by restoring the lost vitality with concentrated foods and following this up with tonics such as arsenic, iron, cod-liver-oil or butter and cream. *

In order to develop the lungs, lung-gymnastics, consisting of deep breathing to exercise both inspiration and expiration twice a day, five minutes each time, will expand the collapsed portions of the lung, bring fresh air into these darkened spaces, and also aid in throwing off accumulated secretions.

Lung
Gymnastics

We can easily combine some pleasure with lung development in young children by having them blow soap-bubbles or colored liquid from one bottle into another by means of tubes. This will expand the air-

HEALTH-CARE OF THE GROWING CHILD

cells in the lungs. In older children a combination of music with lung gymnastics can be obtained by having the child take lessons in cornet or flute playing.

Whooping-Cough

Whooping-cough usually develops in from two to seven days after exposure. The first symptoms are those of an ordinary cold, with a cough. This lasts about ten days, when the cough gets stronger until a pronounced spasm appears. These spasms consist of a number of short quick coughs, then a long-drawn inspiration known as "the whoop." During these coughing spasms the child will get very red, sometimes bluish-red in the face. The spasm usually ends with a vomit. It will be noticed that the cough is worse indoors and is least troublesome out-of-doors. The spasms are strongest at night. This is

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usually so because the windows are shut. Fresh air night and day is very necessary for a cure.

The danger in whooping-cough consists of exhaustion following lack of food as a result of the constant vomiting. The exhaustion from the spasms of cough, especially at night, rob the system of vitality. Loss of sleep due to the coughing paroxysms is another element of danger. Nose-bleed is frequently provoked by a coughing spasm. Rupture in the groin or of the navel may be caused by the violent cough. Neglected whooping-cough extending over months may be the foundation for tuberculosis in later life.

It is better to know the dangers that threaten the patient and guard against them. No mother should undertake the management of a case of whooping-cough without consulting her physician.

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An old superstition is mentioned merely to be condemned, namely: do not irritate the child's respiratory tract by taking it to a gas-house to inhale gas-fumes.

Isolation

The child should not be permitted at school or at play with a healthy child until the cough has entirely ceased. This may be two months after the beginning of the disease, or it may be four months. It is better to safeguard a whole classroom rather than expose it to the danger of contracting whooping-cough.

The duration of the disease is from eight to fourteen weeks. If the disease is neglected the symptoms or the cough may continue several months.

Relief can be afforded during the violent coughing spasms by applying a tight muslin or linen binder around the chest, just as a mother applies an abdominal binder over the abdomen of her infant. This binder

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should be changed every morning and evening. Relief can also be given by having the physician apply a plaster support over the ribs, just as is done in pleurisy. Strips of ordinary adhesive plaster applied over the ribs is best suited for this purpose. The plaster is to be changed every week. Opiates and drugs to cut short the spasms should be used only under the direction of a physician. Bitter almond water in two drop doses may be given every three hours to relieve the cough.

When once the spasms are lessened in intensity and frequency, tonics such as iron, olive-oil or codliver-oil will aid in restoring strength to the body. Milk with seltzer, buttermilk, yolk of egg with lemon-juice, malted milk, cocoa, or chocolate, ice-cream, junket, custard, corn-starch, or tapioca pudding and raw scraped steak are a few of the foods to be given to strengthen the child

Diet

HEALTH-CARE OF THE GROWING CHILD

during the active process of the cough and when the same declines.

Mumps

Mumps consist of glandular swellings below the ears, under the jaw. After exposure mumps develops in one to three weeks.

There is pain on chewing or opening the mouth and on swallowing. The temperature is rarely higher than 101 degrees. An ice-bag, applied for four or five days, will reduce the swelling and cut the disease short provided there is no tonsil- or ear-complication present.

The bowels should be kept loose. Liquid food must be sipped. The child should remain in bed until all swelling has subsided. In some instances too much rubbing of the glands with massage or useless salves may develop an inflammation terminating in an abscess.

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Croup

There are two kinds of croup, one called false croup, the other true or diphtheritic croup.

False croup comes on suddenly and usually at night. The child awakens out of a sound sleep with a barking, hoarse cough. The breathing is usually very noisy when the breath is being drawn in, and the child appears to suffocate. As a rule the croupy cough is so distressing that the children sit up so that they can breathe easier. Perspiration usually covers the face. The temperature will rarely be higher than 101 degrees. These cases occur in children who have gone to school during the day and have retired in apparent good health. The attacks subside by day and may recur several nights in succession. Such children may be classed as of the catarrhal type, subject to colds and coughs. Not infrequently they

False Croup

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suffer with rickets, bronchitis, or wheezing, and the frail condition renders them more susceptible to croup.

Emetic

Relief can be afforded by giving a teaspoonful of sirup of ipecac, repeated every fifteen minutes if necessary, until vomiting is produced. For a child under four years of age give one-half the dose. If the accumulation in the throat is thick and gummy, let the child inhale steam from a tea-kettle or croup-kettle containing one teaspoonful of compound tincture of benzoin or spirits of turpentine to a pint of water. If after vomiting the child is not relieved, a warm, moist, flaxseed poultice with camphorated oil should be applied to the neck under the chin. Unless the attack subsides promptly, a physician should be called so that we may be sure the child is suffering from a catarrhal or false croup and not from true membranous or diphtheritic croup.

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In all diseases affecting the air-passages great relief will be afforded by opening the windows and allowing plenty of fresh air. Do not permit more than one person in the room with a croupy patient. By poisoning the air which occurs when several people are in the room, we indirectly do harm to a croupy sufferer. The patient should be isolated. All children and adults should be excluded from the room.

After the attack of false croup subsides a tonic for the general system will restore tone and may prevent future attacks.

True, Membranous, or Diphtheritic Croup

This form of croup is very serious. It comes on gradually and the symptoms increase from day to day. The fever rises gradually. The glands of the neck become swollen. The croupy cough increases in severity from hour to hour. The breathing

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Wheezing

will be labored and noisy. Wheezing sounds on inspiration can be heard in an adjoining room. Such labored breathing will compel the child to sit up and gasp for air. The face will lose its pinkish color and become bluish. The child looks distressed. The cough is short and barking with no expectoration. The throat is filled with a thick membranous mucus which is the cause of the trouble.

On examination of the throat we will not see yellowish-white spots or dots as we see in diphtheria, because these spots are so low in the throat that they can be seen only with the aid of a laryngeal mirror.

Until a physician can be called, a teaspoonful of ipecac mixed with a teaspoonful of glycerin may be given. In many cases vomiting will occur, but it is not essential to produce vomiting. If the croup gets worse, relief can only be given by

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inserting a tube through the mouth into the larynx. This process is called intubation. Some relief will be afforded by applying a warm flaxseed poultice, to which camphorated oil or mustard is added, to the neck. Isolate the child from all others. Antitoxin should be injected as early as possible. There is great danger of delaying the injection of antitoxin in suspicious cases. Even though a case of croup does not prove to be real diphtheria, no harm can be done by the injection of antitoxin.

As a rule, it takes from twelve to twenty-four hours to determine whether or no a case is diphtheria. The physician or nurse can take a smear from a suspicious throat and send it to a laboratory to have determined whether or no the Klebs-Loeffler bacillus which causes diphtheria is present.

Antitoxin destroys the poison or toxin given off by the diphtheria germs. To pre-

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vent complications such as paralysis or kidney disease, or in fact any complicating disease, antitoxin should be injected. The earlier it is used the surer are we of avoiding fatalities. It is too late to argue for or against antitoxin after death has occurred.

Diphtheria is robbed of its terrors by using antitoxin as soon as we see symptoms which point toward the beginning of diphtheria.

Diphtheria

Diphtheria first appears as yellowish or yellowish-gray spots or patches. They are seen on one or both tonsils, behind the tonsils on the pharynx, or sometimes in the nose. As a rule, the temperature rises, and the glands below the jaw become swollen. There may be pain on swallowing. The appetite is poor. Thirst becomes in-

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tense. The bowels are sluggish, as a rule constipated.

I have previously called attention to the necessity of examining the throat of every child that feels sick. We may be surprised to find that a child with no appetite and some fever will not complain of its throat, but examination of the throat will reveal the true nature of the trouble. Any spots visible in the throat demand medical attention. While many cases of tonsillitis are mild, we must not run the risk of neglecting a true case of diphtheria.

The complication of the poisons given off by the germs of diphtheria may cause paralysis or a weak heart. This can all be prevented if an injection of antitoxin is given as soon as the disease is detected, thus preventing the poison of the germs from doing serious damage.

Antitoxin is a specific serum which, when

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Antitoxin

used early, in proper dosage, prevents complications. There are two doses, one for healing purposes and the other used as a preventative of diphtheria, the so-called immunizing dose.

When it is known that children have been exposed to diphtheria they should be protected with an immunizing dose of antitoxin rather than run the risk of having them contract the disease. A child exposed to diphtheria, if infected, usually shows the first symptoms three to ten days after such exposure.

Isolation and Disinfection

A case of diphtheria should be isolated from all other healthy members of the family, and remain isolated until all symptoms of the disease have subsided. A convalescent case should not be permitted to mingle with other children until a culture taken from the throat shows the absence of the diphtheria bacillus.

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Our views concerning disinfection have changed considerably during the past few years. It has recently been proven that sunlight and fresh air will kill more germs than strong disinfectants. Most of our health departments have recognized the uselessness of disinfecting with chemicals, and have abandoned the same, using sunlight, fresh air, and scrubbing with soap and water. In New York we use no other disinfection after diphtheria and measles.

The Health Department requires that each apartment in which a communicable disease existed shall, on the termination of the same, be thoroughly scrubbed and freshly painted. If the rooms are papered, the same should be scraped from the walls, and fresh paper applied.

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Chicken-Pox

The Eruption

The eruption consists of elevated pustules filled with a yellowish serum. It is an infectious disease, usually contracted by direct exposure. A child who has been exposed usually contracts the disease within two to three weeks after such exposure.

A rash of small pink papulæ is first seen on the face, scalp, or back, and quickly spreads to the abdomen. These papulæ soon become elevated pustules filled with a yellowish serum. The Germans call the disease "Wasser pocken," because they resemble water-blisters. In a few days these pustules dry up and crusts form, which drop off within a week or two. The eruption appears in crops. While some of the pustules are drying up, others are just beginning to appear.

Fever

As a rule, the temperature does not go above 101 degrees.



CHICKEN-POX
For description see text.

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COMMUNICABLE DISEASES

Chicken-pox has no association with smallpox, and will appear in either a vaccinated or unvaccinated child. It is the mildest eruption in childhood, and need occasion no alarm. Complications never occur. To guard against having the evidence of pox later on, the child should be warned against scratching the crusts. Alcohol, in which a few grains of menthol have been dissolved, stops the itching, if applied every few hours.

No solid food should be permitted during the first few days of the eruption. The bowels should be kept loose with the aid of a wineglassful of citrate of magnesia twice a day. Cases of chicken-pox should be separated from healthy children for at least two to three weeks, or until all crusts have dried and fallen off.

Isolation

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Measles

Measles is most frequently found in children between the third and seventh year. It is very contagious. Measles poison travels upward like smoke. As a rule, the child on the fourth floor will contract the disease from the child on the third floor. The children on the lower floors, however, usually escape. Congested apartments, crowded houses, asylums, institutions, and the steerage of ships breed measles. It takes from seven to fourteen days for the disease to develop after the child has been exposed. Measles is most contagious one or two days before, and about three days after, the eruption appears on the body.

The first symptoms of measles are a slight fever, and symptoms resembling cold in the head, with sneezing, coughing, and running nose. The appetite will be poor and thirst

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excessive. The eyes will be dull and the child appears languid.

Generally on the fourth day the rash is The Rash seen, first on the face which appears quite swollen, then on the neck, from where it spreads rapidly all over the body. The rash is bright red and appears in blotches with little crescent-shaped areas of white skin between the blotches. The rash remains at its height about three days, when it begins to fade. In some cases the skin peels Desquamation off in fine flakes or scales.

Several days before the eruption appears there will be restlessness and peevishness; the child will be tired and desire rest.

The temperature before the eruption ranges between 100 and 101 degrees in the morning, reaching 102 degrees in the evening. During the succeeding three or four days the temperature may remain about Fever the same, but will suddenly rise to about

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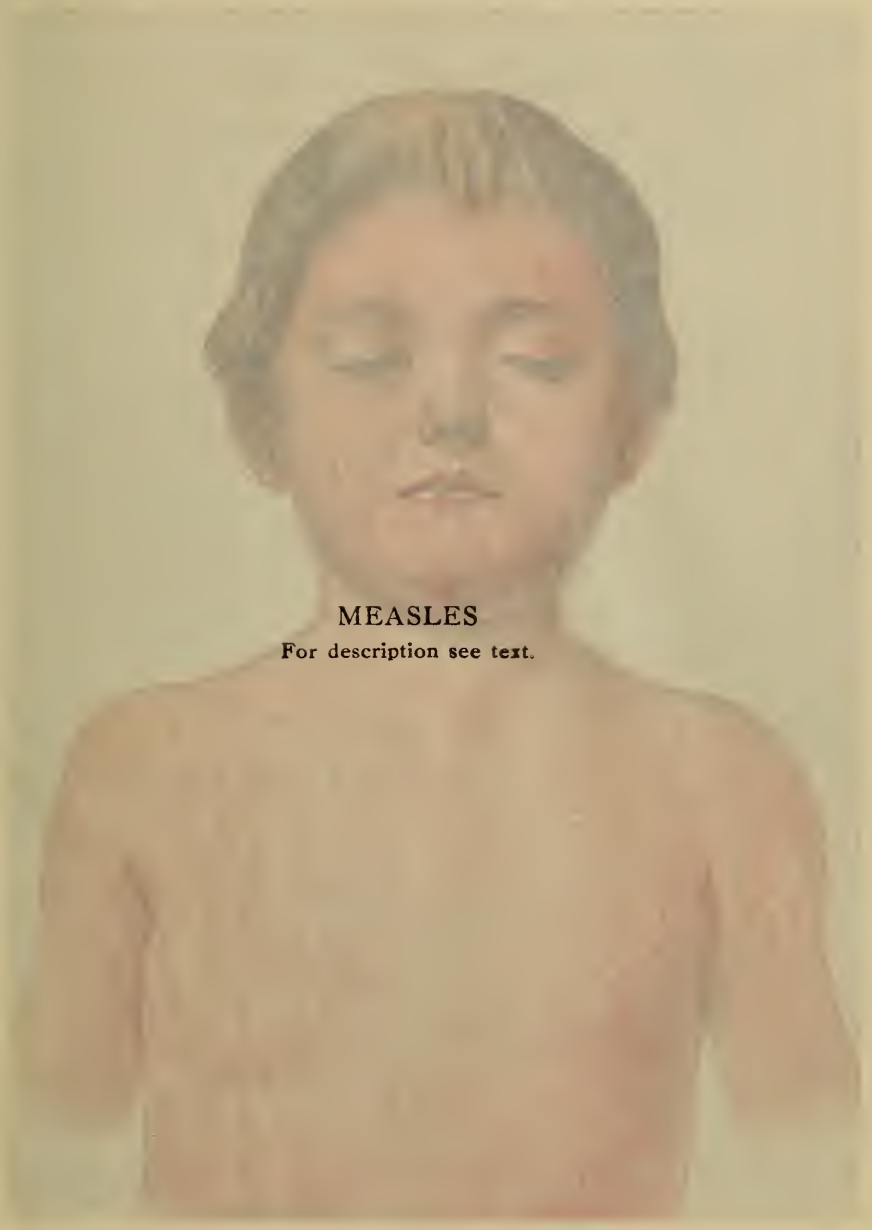
103 or 104 degrees. About the same time a generalized eruption appears. Not infrequently the temperature reaches 105 degrees, twenty-four hours after the eruption is at its height. This high temperature is followed by a sudden drop of three or four degrees, or to almost normal, forty-eight hours after the eruption has fully appeared.

To be on the safe side, every child with a cold in its head, with sneezing and coughing, should be put to bed at least until the fever subsides, unless the child has already had measles.

Complications

Many cases of measles recover without any complication, but there are many others followed by sore eyes, a discharging ear, or by pneumonia. Now and then the pus germs which accompany measles will give rise not only to ear abscess, but also to an abscess in the chest-wall, called empyema.

One of the worst complications following



MEASLES
For description see text.

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One of the worst complications following



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measles is tuberculosis. A neglected bronchitis, followed by pneumonia, may extend over a long period of fever and finally terminate in tuberculosis. It is important, therefore, to know that complications may follow an apparently innocent measles. My advice is to keep the child isolated and in bed from six to seven days in summer, and in winter from seven to ten days, after the eruption has appeared. The room should be kept at an even temperature of from 70 to 72 degrees. Plenty of fresh air must be admitted. The light must be subdued, as the eyes usually are inflamed. The eyes should be washed several times a day with a boric acid solution. To stop itching the body should be rubbed with vaseline. Special rules for individual cases are required if the child has fever or other complication.

Isolation

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German Measles

This is a mild form of rash resembling measles. After exposure the child will contract the disease in from seven to twenty-one days. Contrary to true measles, there is an absence of sneezing, running nose, and catarrhal symptoms such as bronchitis. The temperature is not as high as in measles, rarely reaching 102 degrees. To distinguish German measles from true measles we have glandular swellings behind the ear, which are never present in true measles. The eruption is usually a pale red and varies in size from little spots the size of a pinhead to those of a pea. Sometimes the spots are isolated, again they will run together. The eruption fades after four or five days and rarely has any complication associated with it. It is better, however, to keep the child in bed, protected, while the eruption lasts.

Swollen
Glands

The Rash

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Scarlet Fever

Scarlet fever is one of the most serious diseases on account of the complications which are liable to result. Vomiting is one of the first symptoms. There is fever, loss of appetite, and usually pain on swallowing. The Tongue

There is a nasal tone of voice, caused by the tonsillar swelling. The tongue becomes coated white, with little red dots resembling a strawberry. A rash will be seen first on the neck and chest. It is of a pin-point The Rash character and has a bright scarlet color.

In severe cases the rash will so run together that the skin resembles that of a boiled lobster. The rash usually spreads over the entire body and remains about from five to seven days, after which the skin begins to peel. On the palms of the hands, on the Desquamation soles of the feet, on the ears, and between the thighs peeling is very pronounced. It will take from two to three weeks,

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sometimes four weeks, for the body to peel.

On looking into the throat we will notice yellowish-white spots scattered over both tonsils, and sometimes also below and behind the soft palate. The glands below the jaw are always swollen. The temperature will range between 101 and 104 degrees early in the disease. Such children are irritable, and do not wish to be disturbed. They are thirsty and drowsy.

We formerly believed that the disease was spread by the germs or poison contained in the peeled skin. We now know this to be wrong, as the germs die when exposed to sunlight. For this reason the board of health in New York City has stopped fumigation and disinfection of houses wherein scarlet fever occurred.

Isolation

All cases of scarlet fever should be isolated. Healthy children should be removed

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and not permitted *to come in contact* with the sick child, as the disease is spread by contact.

If scarlet fever develops the child should be put to bed and kept there at least five weeks. This is not done to prevent the spreading of the disease, but because it takes several weeks for the poison to pass through the body by way of the kidneys, and also to restore the vitality of the heart.

For restlessness a warm sponge-bath may be given under cover. A little alcohol may be added to the water. The food must be liquid during the first two weeks, such as milk and broths. Later custards, puddings, vegetables, and eggs may be added to the diet. Water should be given liberally. The bowels must move daily and the kidneys kept active. The kidneys may remain weak for several months or even several years after an attack of scarlet fever.

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Every mother should realize the importance of having the urine examined at least once a week, to guard against the development of a chronic nephritis or inflammation of the kidneys. The ears and the throat, likewise, demand supervision.

The diet requires supervision. Many children will be compelled to abstain from meat and other protein foods, such as eggs, until the kidneys become normal, which may be months after the attack of scarlet fever began.

After convalescence has been thoroughly established, the child's throat should be carefully inspected for the presence of adenoids or enlarged tonsils. If diseased tonsils or adenoids are present, they should be removed, as they are likely to be the source of another disease like diphtheria which may prove fatal.

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Typhoid Fever

This disease enters the body by means of the typhoid bacillus. The bacillus is found in water, in milk, and frequently in vegetables. Contaminated creeks and pools of stagnant water may harbor the typhoid bacillus. If a case of typhoid exists in a household and the discharges from the bowels or the urine are not properly disinfected, disease germs will remain alive and may be transmitted to others.

The typhoid bacillus multiplies very rapidly, and if it finds its way into a substance like milk, it can communicate the disease to any one drinking such milk. Small epidemics have been reported in communities without the source of the infection being definitely known. These obscure epidemics are usually caused by typhoid convalescents who carry typhoid germs in their throat and in the discharges from their bodies.

Carrier

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These carriers can communicate to every one with whom they come in contact. It is well, therefore, to inquire before accepting a new cook or nursemaid as to her previous history of illness and see if she is a carrier.

The most common symptoms of typhoid are headache, fever, and loose, greenish stools. Typhoid fever may run a mild course, or it may run a severe course. It may last two to three weeks or extend over three to six weeks. As a rule, there are small rose-colored spots visible on the abdomen and chest. These spots are few and far apart. They are very small and resemble neither scarlet fever nor hives.

When a child is very languid and shows a slight rise of temperature ranging between 100 and 102 degrees, with the above-named symptoms, it should be put to bed and watched. If the fever does not subside,

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but rises from day to day, a blood-test should be made. As a rule, the positive diagnosis of typhoid fever can not be made until the second week of the disease, when we can get a positive Widal reaction in the blood. The urine will show a Diazo reaction which, combined with the other symptoms, strengthens the diagnosis of typhoid. The spleen is usually swollen. If typhoid fever exists in the vicinity, one would naturally suspect this disease.

Typhoid may be latent and require a week or ten days to develop properly. One is therefore safest in keeping every child having fever in bed until the nature of the disease is established.

Typhoid is a milder disease in children than in adults; hence, with good care and strict attention to the diet, not permitting the child to have food which is contraindicated, the chances are far better than in

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adults. Children do not use alcohol, tobacco, or coffee; hence, the heart-action is better and the system can undergo the strain of an infection like typhoid and readjust itself without complications more easily than that of the adult.

As a safeguard against typhoid in an infected district, all milk, water, and food of all kinds should be boiled. Raw vegetables and raw fruits eaten indiscriminately may have been the origin of the disease; therefore, all vegetables and fruits should be cooked.

Diet

The diet should consist of lamb or chicken broth, split pea soup, boiled milk, butter-milk, albuminized tea, and water. Later, during convalescence, junket, custard, corn-starch, tapioca, and fruit juices may be given.

Chapter III

SYSTEMIC DISEASES

Appendicitis

APPENDICITIS is not uncommon in children. The attacks are different from those we have in adults. It is important to recognize the symptoms. Fever is associated with all attacks. Some attacks begin with vomiting and diarrhea and distended abdomen. Other attacks begin with pain, or cramps, and vomiting. Some children will have recurring disturbances every month or two, with pain, fever, and diarrhea or constipation. We therefore have no distinct localized pains on the right side in the region of the appendix, as is found in the adult.

On examination of the abdomen we will usually detect a swollen or sensitive appen-

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dix. In nervous or unruly children, if we are suspicious of appendicitis, it will be necessary to give a few whiffs of laughing-gas (nitrous oxide) or a few drops of chloroform or ethyl chlorid to quiet the child so that the abdomen can be carefully examined. In some cases it may be necessary to take an X-ray picture of the abdomen, to study the condition of the appendix.

Attacks of colitis simulate appendicitis. If a child is constipated, retention of the stool and gas will give rise to distention and flatulence. An enema of soap and water will relieve this condition. If, however, we are dealing with appendicitis, then no relief will follow the emptying of the bowel by the injection.

Pain in
Abdomen

Do not be frightened whenever the child complains of a pain in the abdomen. In a girl around the age of development, or between the eleventh and fifteenth years,

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remember that cramps in the abdomen will appear for several months before actual menstruation takes place.

Another reason for pains in the abdomen is the passing of small uric acid crystals through the kidneys, which will give rise to colicky pains. These pains may also appear on the right side in close proximity to the appendix. Colitis is one of the most frequent causes of pain on the right side. This pain may be caused by dietetic errors. The eating of too much ice-cream or rich cream-cakes, or chilling the body by prolonged bathing in the ocean, or by wading in lake water, may give rise to abdominal pains.

Neuralgia of the intestine may be caused by the distention due to hard-formed and impacted stools. Such stools are hard and dry like marbles. From the pressure pain results.

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Tapeworms and round worms have been described in their respective chapters. They are frequently causes of abdominal pains. From what has been said, one can see that we should exercise caution in deciding that the child has appendicitis simply because pain exists in the abdomen.

Malaria

It is surprising to see how many children are supposed to suffer with malaria, and how few really have this disease. Malaria is an infection that gets into the blood and can be detected by the laboratory method of examining the blood. When blood contains plasmodium, then malaria is present, not otherwise. The common symptoms of malaria in children are not the same as those found in adults. The spleen is always swollen in malaria. In children it is very difficult to note a chill, although chills are

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frequently present. The fever is high, The Fever reaching 104 or 105 degrees in the afternoon of every second or third day. Children complain of being tired, there is loss of appetite and irritability. Perspiration is usually noted.

We rarely see cases of malaria in large cities, but when they do occur they are very easily recognized by the examination of the blood. Malaria in children is not a fatal malady. It runs the same course as in adults. There is loss in weight until the fever subsides. Change of air and a diet of concentrated foods—all dairy products, fermented milk, etc.—must be supplemented by giving quinin, and later on Fowler's solution, during recuperation.

Very frequently tuberculosis gives symptoms which are identical with malaria. No mother or nurse should rely on fever, perspiration, and loss of weight in forming

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a conclusion that the child has malaria, unless the physician actually determines this condition by a blood-test.

Growing-Pains

Frequently physicians are asked what can be done for growing-pains. There is no such thing as a growing-pain. The body grows because of the physiological increase normal in childhood. There is no pain caused by the growth of the hair, the nails, the teeth, or the joints.

When pains in the joints or muscles are described, the throat should be examined. As a rule, tonsillitis is a forerunner of joint or muscle pains, which are usually due to an inflammation of the membranes of the joint itself.

Not infrequently physicians will note the existence of heart disease, which, on questioning the family, can be traced back to

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a supposedly innocent attack of growing-pains.

Therefore, if a child complains of pains in the joints, take him to a physician rather than run the risk of having chronic heart disease due to neglected rheumatic inflammation.

Pains in the thighs or in the leg may be symptoms of tubercular hip-joint or knee-joint disease, and these points should be remembered before deciding that a pain in the leg, sometimes due to neglected tonsillitis, can be due to growing.

Rheumatism

There are two kinds of rheumatism: muscular rheumatism and joint rheumatism. Muscular rheumatism usually follows exposure to a draught, as when riding in an open car on a damp day. These pains may be confined to any of the muscles of the

Muscular
Rheumatism

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body, the neck, the back, the arms, or the legs.

The pains are noticeable only when the affected muscles are used. Turning the head or neck causes severe pain. Bending forward or sideways in rheumatism of the back, or when the arms and legs are extended as in walking or reaching out causes pain which ceases when the extremities are not used.

These rheumatic pains yield very easily when massage is used. A warm poultice is very soothing, and will frequently relieve the stiffness and pain. Such children should be kept in bed, as the warmth and rest do much good. In guarding against recurring attacks, warm underclothes should be worn, and the body given a warm bath before retiring.

Joint or
Inflammatory
Rheumatism

Joint rheumatism is frequently called inflammatory rheumatism. One or more

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joints will be painful, swollen, and tender to the touch. There is usually fever, ranging between 100 and 102 degrees. In many cases throat trouble, such as tonsillitis, influenza, or grippe, will be a forerunner of the rheumatic inflammation. It is therefore important to place every child having a sore throat in bed for a few days rather than try to fight nature by constant exposure to the elements. Neglected colds, such as prolonged tonsillitis, are frequently complicated or followed by rheumatism.

A condition known as rheumatic tonsillitis is very common among children. When rheumatism begins in childhood it should be regarded with apprehension. The great danger consists in the frequency of relapses. Recurring attacks of rheumatism mean a spreading of the disease from joint to joint. Not only may deformity of the joint and stiffening follow, but more often a heart

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complication may associate itself which can prove fatal.

Treatment

If removed from the city and a physician is not accessible, the first thing to do is to place the child in bed. Stop all meat and eggs. Give milk, buttermilk, and fruit juices, such as lemonade or pineapple juice, for thirst.

The bowels should be kept loose by giving one-half teaspoonful of Rochelle salts in sweetened water every morning, and repeating the dose every three hours until effectual.

The joints should be protected with cotton and oiled silk. If very painful, an ice-bag may be applied. Many joints feel better with warm applications, such as dry bran. Often a tight, dry bandage is all that is necessary.

PART IV

DISEASES OF THE SKIN AND
NERVOUS SYSTEM

Chapter I

DISEASES OF THE SKIN

Rashes

THERE are dozens of rashes that may appear on a child's skin. Some of them are due to toxins from food taken into the body. Some children will always have a rash after eating oatmeal, shell-fish, strawberries, or eggs, which shows a sensitive condition of the blood. (Read article on hives.)

Whenever a rash is noticed, the temperature should be taken. If fever exists, a physician should be called.

There are many obscure rashes in which there may be little or no fever. The mother should examine the throat to see if small yellowish spots are present; if so, no time

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should be lost in calling a physician. Now and then scarlet fever develops without fever; this should be remembered. It is safer to call a physician to pass on a rash rather than neglect a rare type of eruption.

Insect-Bites

Mosquito bites or any insect sting causing swelling and blotches can be relieved by applying pure alcohol or spirits of camphor. If the part swells from scratching, apply lead water on gauze and cover with oiled silk. If fever develops, send for a physician. The great danger lies not in the poison of the insect bite as much as in the poison of the nails in scratching or getting germs into the swelling.

A half teaspoonful of cream of tartar added to a glass of lemonade, if given several times a day, is cooling to the blood when intense itching is present.

DISEASES OF THE SKIN

Eczema

Eczema is an eruption of the skin which appears as reddish or yellowish scales, moist or dry, in round or irregular-shaped blotches. It will be found in many children on the cheeks, arms, legs, or any portion of the body. A favorite place for eczema is the scalp. There is an intense itching of the parts affected, especially at night. The itching is so intense that some children scratch until the parts bleed. They are peevish and irritable by day and restless and sleepless at night.

As a rule, this condition is caused by errors in diet. Overfeeding of sugar, especially too much candy and cake, and starchy foods, such as potatoes, may cause eczema. Large quantities of cereal, such as oatmeal and rice, are predisposing factors. Heredity plays an important part in eczema. As a rule, a father or mother suffering with

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eczema will usually have children so affected. Very fat children are prone to eczema. In many instances starvation and inanition due to the absence of fresh vegetables, and the feeding of canned vegetables or canned condensed milk, may cause this condition. Deficient ventilation, lack of exercise, and unsanitary conditions, such as insufficient bathing, may cause eczema.

Eczema may last for months and, if neglected, may become chronic and last for years. The first thing to do is to empty the bowels with a mild laxative. A child of from five to ten years may take one-half teaspoonful of compound licorice powder morning and evening for three days. This will cleanse the bowels, cool the blood, and relieve the itching and overheated skin.

The diet should be regulated by giving milk; in no case is cream to be allowed. Buttermilk, fruit, and all fresh vegetables

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may be given. Meat and eggs must not be given. Cheese, fruit, bread, and a glass of milk may be given in the evening. Large quantities of water should be given to cool the body and to flush the kidneys.

Water and soap should not be used on the skin. If the scales and crusts adhere, they may be loosened by soaking in an oatmeal bath. Oatmeal water is made by soaking for twenty minutes one pound of oatmeal in two quarts of boiling water.

To relieve the itching an ointment, consisting of one teaspoonful of oil of tar added to and rubbed up with one ounce of zinc ointment, can be applied after the scales have been removed with the oatmeal bath. The salve may be used two or three times a day. Do not use soap and water to remove the salve, but continue to use salve on top of salve.

If the eczema is confined to the scalp, a

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lather of tar soap can be thoroughly rubbed in and the scalp shampooed until all the scales are removed. After the scalp is clean, rub in the tar and zinc oxid salve. Repeat the shampooing every third night, but continue to use the salve morning and evening during the three days in which you do not shampoo the scalp.

Erysipelas

Erysipelas is an inflammatory affection of the skin resulting from the introduction of disease germs. These germs can be introduced by scratching or by lacerating the skin with a rusty nail or any unclean object. An open wound, or boil, or abscess, if it is not properly cleaned and bandaged, will frequently be infected by the introduction of erysipelas germs. We must exercise a great deal of care in handling a wound, as there is always danger of contamination.

DISEASES OF THE SKIN

Any person dressing an open wound must wash his hands with soap and water before each dressing is changed. The finger-nails must be thoroughly scrubbed, and all accumulated dirt underneath removed.

Erysipelas manifests itself as a reddish glossy flush which usually extends several inches around a wound. The temperature varies between 101 and 104 degrees. The skin feels hot and appears thick and swollen.

The infection spreads rapidly, and a flush which began at the nostril can extend to the cheeks, forehead, and scalp in a few days. Herein lies the danger. No case of erysipelas should be neglected, as the child's life may be endangered.

Ringworm

Ringworm is a contagious disease caused by the invasion of a fungus. Its favorite location is on the scalp. It is not a worm

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as the name implies. It is not always in ring-shape. It is recognized by patches sometimes circular, sometimes oval, in shape by scaly grayish-white marks, looking as if they were covered with dust and ashes. These marks are covered with stumps of hair, which shows that hairs have been broken off, this being the distinguishing mark of the disease. Although curable, some forms of the disease take years to eradicate.

It is usually transmitted by clothing such as caps, towels, and pillow-cases containing the spores.

Treatment

The first step in the treatment is to have the hair clipped short. After a thorough cleansing of the scalp with tincture of green soap, a thick coating of tincture of iodine should be applied. Three days later another washing of tincture of green soap should be given, and later a coating of tinc-

DISEASES OF THE SKIN

ture of iodine. If after several applications of the above no improvement is seen, then an application of a 5 per cent. chrysarobin-ointment should be given morning and evening until improvement is noted. If the skin is sensitive and shows inflammation after several applications, then two days should elapse before the next application is made.

In institutions, nurseries, and schools, children should be isolated while suffering with ringworm. The danger in boys as well as in girls consists in the baldness which may be permanent after the ringworm disappears.

Ivy-Poison

Ivy-poisoning manifests itself by an intense inflammation of the skin, caused by contact with the poison-ivy plant. Some children are so susceptible to it that they need only come moderately near it to have

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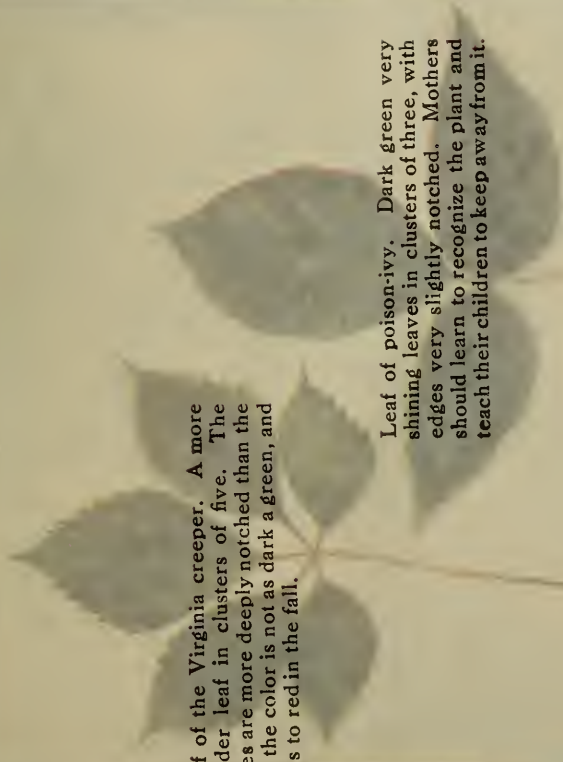
the rash come out. The rash usually comes out within a few hours after exposure. The skin becomes hot and red. There is intense itching and swelling. Crusts form from the dried discharges of the vesicles that form on the inflamed surface. The swelling sometimes becomes so intense that the eyes can not be opened.

Sulfur Bath

The intense itching and swelling can best be relieved by a tub-bath containing sulfur, the crude sulfuret of potassium, one-half pound to a large tub of water, temperature 100 degrees for a full body bath. These baths may be given morning and evening. Until the sulfur can be obtained bicarbonate of soda and water will relieve the itching.


Sunburn

After exposure to the sun, the burn may be relieved by applying a mixture containing zinc-oxid three teaspoonfuls, lime-water



Leaf of the Virginia creeper. A more slender leaf in clusters of five. The edges are more deeply notched than the ivy, the color is not as dark a green, and turns to red in the fall.

Leaf of poison-ivy. Dark green very shining leaves in clusters of three, with edges very slightly notched. Mothers should learn to recognize the plant and teach their children to keep away from it.



IVY-POISON

For description see text.

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the rash come out. The rash usually comes out within a few hours after exposure. The skin becomes hot and red. There is intense itching and swelling. Crusta form from the dried discharge of the vesicles that form on the inflamed surface. The swelling sometimes becomes so intense that the eyes can not be opened.

The intense itching and swelling can best be relieved by a tub bath containing sulfur, the crude sulfur of potassium, one-half pound to a gallon of water, temperature 100 degrees Fahrenheit. These baths may be given morning and evening. Until the skin is obtained bicarbonate of soda and will relieve the itching.

After exposure to the burn may be relieved by applying a mixture containing zinc-oxid three times a day, lime-water



DISEASES OF THE SKIN

three ounces, and rose-water three ounces. Bathe the skin or saturate a piece of gauze and apply every hour. Linen underwear will cool the skin, so will silk. Rice-flour or corn-starch used as a dusting-powder is soothing.

Frost-Bite

Long exposure to cold frequently results in frost-bite. The parts usually affected are the fingers, toes, ears, or nose. If exposed to cold too long the skin becomes numb, white, and wrinkled. Upon coming into a warm room the parts become red, swollen, and itching. Sometimes blisters form over the skin.

If a child has been overexposed to the cold, it should be brought to a warm room gradually. The hands or parts affected should not be held near the heat, but should be dipped in cold water and constantly rubbed. This water can be gradually

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warmed until it reaches room-temperature. The parts can later be bathed in camomile-tea at a temperature of 90 degrees until the skin is thoroughly macerated or shriveled. Owing to the serious nature of frost-bite the child should receive medical attention if the above treatment is of no avail.

Hives

An eruption of large red blotches with whitish centers, resembling mosquito-bites, is known as hives. They are found in children whose blood is sensitive to certain proteins. For example, some children will have hives after eating oatmeal, others after eggs, strawberries, lobster, or crab. Such children usually have severe rashes following an injection of antitoxin. If ill with diphtheria it is important for the mother to call the physician's attention to the susceptibility of her child.

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Milk of magnesia or citrate of magnesia should be given as a laxative. Rhubarb and soda may be given to cool the blood. Locally, bicarbonate of soda and water will allay the itching.

Itch

Itch usually appears between the fingers and the toes in the form of a moist, scaly eruption. It is caused by a fungus or germ which gives rise to an intense irritation. Scratching causes bleeding. The eruption is frequently found on the face. It is usually contracted from some other child. The school and classroom where children play together is the most usual source of spread. Relief can be afforded by bathing the affected parts with warm sulfur-water, ten to fifteen minutes, then applying sulfur ointment and a snug-fitting bandage to prevent scratching. This condition will last

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many weeks, and persistence in the treatment will be necessary to effect a cure.

Warts

These small growths may appear singly or in bunches like cauliflower. They usually appear on the moist surfaces of the body, the rectum, the vagina, or in the armpit. They appear on the hands, the feet, and the neck.

A bit of absorbent cotton on the end of a toothpick should be dipped into carbolic acid and applied to the surface of the wart. After three minutes apply in like manner, on fresh cotton and toothpick, fuming nitric acid. This second application will turn the wart black. In order not to burn the surrounding skin, cold cream or vaseline should be applied around the root of the wart before applying the acids. This treatment may be repeated every three days.

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Another successful method is to apply a stick of nitrate of silver, or to have a physician cauterize the warts by first applying ethyl chlorid and then using a galvano cautery.

Head-Lice

In school, kindergarten, or where children assemble head-lice may be contracted. Especially does this vermin exist in convalescent children deprived of proper care. In the chapter on swollen glands, I have mentioned that swollen glands at the root of the hair, at the back of the neck, frequently owe their origin to head-lice. The first symptom to appear is itching.

At hospitals and institutions we order the hair cut short and the scalp saturated with kerosene. The child wears a bathing-cap during the night, and in the morning the scalp is shampooed with soap and water. Repeat if necessary every third night until

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the scalp is clean. This treatment destroys the living parasite. Instead of the kerosene, two ounces of larkspur with one ounce of vinegar and one ounce of ether can be applied to the scalp after a thorough shampoo. This can be repeated nightly until all lice are destroyed.

The female lays eggs in vast numbers, these eggs stick to the hair-shaft and are recognized as tiny grayish-white bodies.

These "nits" or eggs can not be removed by brushing, no matter how persistently one brushes, and this proves their identity, for dandruff and crusts would easily be removed by a hard brush.

Nits

These nits can best be removed by saturating the hair with strong vinegar or with pure alcohol and using a fine-toothed comb, being careful not to touch the scalp if it has any sores or scratches. Olive-oil may be applied to any sores on the scalp.

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Dandruff

Deficient lubrication by the oil-ducts causes dryness of the scalp, and the skin peels off in fine white particles. These particles destroy the hair-roots and should be removed by washing. Poor circulation may be aided by massage of the scalp. The scalp should be washed with tar-soap, the lather being rubbed into the scalp or hair-roots, rinsed thoroughly with lukewarm water, followed by cold water, and rubbed dry. After the hair is dry, massage with alcohol containing 1 to 1000 bichlorid of mercury, then apply sufficient borated vaseline to oil the scalp but not the hair itself. Repeat the washing and massage every other night for two weeks; later once a week will be sufficient.

Chapter II

DISEASES OF THE NERVOUS SYSTEM

Defects of Speech

Stammering

AMONG the most important of the common nervous defects of childhood are stammering, stuttering, and lalling. Stammering is due to incoordination of the muscles involved in articulation. Stuttering results from repeated contractions of the muscles concerned in forming some initial syllable. Lalling is baby-speech, in which wrong consonants or vowels are employed and the pronunciation of the words is slurred. Each of these defects is curable, and we must therefore ascertain the principles underlying their treatment.

The mechanism of speech is twofold—vocalization and articulation. The former

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which is produced by the vibrations set up in a column of air passing over the vocal cords depends on the movements of breathing, on the vibrations of the vocal cords, and on the resonating cavities in the head and in the neck. By its help the five "physiological" vowel sounds are produced, namely, *EE*, *A*, *AH*, *O*, and *OO*. Articulation is produced by totally different means. The current of air from the lungs is interrupted or released by the muscular action of the lips or of the tongue at one of three situations—the so-called "stop-positions." In the first stop-position the lips are suddenly parted or brought together so that one of the following consonants is uttered—*P*, *B*, *W*, *M*. The second stop-position is formed by pressing the tongue against the hard palate; the consonants that now result are *T*, *D*, *L*, *N*, *R* (and *SH*). The third stop-position is nearer the back of the mouth,

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and is used to form the consonants *K*, *G* (girl), and *Y*.

In the majority of cases the nature of the defect is essentially a want of harmony between the mechanisms of vocalization and of articulation; the child is unable to pass either smoothly or quickly from one to the other. In almost all cases the difficulty lies not in articulating, but in vocalizing, and therefore our first step in treatment must be to teach the child how vocalization differs from articulation. We must then make him give special attention to his vowel sounds, and, in order to increase his command over them, we *should begin by teaching him to take steady breaths* and to control his expirations. When he has acquired this power, he must be exercised in the different vocal sounds.

The consonants are to be learned in three groups, namely, the “voiceless” consonants,

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P, F, Th (thin), *S, Sh, T*, and *K*, which are without any vocal element; the “voiced” consonants, *B, W, V, Th* (thou), *Z, Bh, D, L, R, G*, and *Y*; and the voiced nasal consonants, *M, N*, and *Ng*. The important point in learning this classification is that the vocal element in the last two groups should be given their full value. Thus, in pronouncing the three words, *brown, prim*, and *mind*, the child must give the full vocal character to the initial consonants of the first and last words, *bur-own* and *um-ind*; but the second word, beginning with a voiceless consonant, can be pronounced only as *pr-im*.

When these consonants have been learned by the aid of single words, the child should begin to practise sentences.

In doing this his attention must be specially directed to vocalization. There is no better way of enforcing this precaution than

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by making him intone in clerical fashion. He will then be compelled to attend rather to his voice than to his articulation. His earliest sentences should be made up of words whose initial consonants are all either voiceless or voiced. In order to acquire facility in the use of the various stop-positions, he should be given sentences to practise which contain the consonants produced at the several positions; thus, for the second position, a sentence such as "Not till late did she return."

These are the simple lines on which stammering is to be treated. Frequent practise is essential, and the exercises are to be selected according to the particular difficulties of speech in each case. By testing the child's vocalization and articulation as soon as he comes under treatment, we shall have no trouble in ascertaining wherein lies his defective power.

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In cases of lalling, the letters that can not Lalling
be pronounced must be found out by making
the child repeat the vowels and the con-
sonants. Each of the latter must be tested
as an initial letter, as a terminal letter, and
as a middle letter (Forsyth).

Chorea

Chorea is frequently called St. Vitus's
dance. It consists of involuntary twitchings
of the muscles of the face. It may also
affect the muscles of the arms or legs so that
walking is jerky, and any movement of the
arm is spasmodic in character. These
twitchings occur when the child is awake,
but never while asleep.

Eye-strain, due to overwork at school,
shock, fright, and fear, are among the causes
of this condition.

Frail, nervous children are more suscep-
tible than strong, hardened children. In

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Habit-Spasm

rare instances astigmatism has been mentioned as a cause, although I have never known it to be the cause. Many children acquire this habit by imitation. They will imitate other children who twitch until it becomes a habit. This is called habit-spasm.

If school or overwork is the cause, the child should be sent to the country. Cold showers or baths to tone the nervous system are very important. Meat, coffee, and too many eggs are stimulating, and should be prohibited. Vegetables, fruits, cereals, cheese, milk, and buttermilk should form the bulk of the diet. The eyes must rest; reading should be prohibited. Resting the eyes with a smoked glass or placing the child in a darkened room several hours a day will soothe the nervous system.

DISEASES OF THE NERVOUS SYSTEM

Convulsions or Spasms

Convulsions are frequently met with in childhood. An overloaded stomach resulting in high fever will cause congestion of the brain, and may result in convulsions. Where an adult might have a headache, a child may get a convulsion.

Sensitive, nervous, and frail children, especially those who have frail bones, muscles, and nerves, are susceptible to convulsions.

Convulsions occur suddenly. An apparently healthy child will, without warning, become rigid. The eyes will become fixed and will stare, the jaws will stiffen, and there may be frothing at the mouth. Breathing will sometimes be suspended for a moment. Along with rigidity of the body the muscles will twitch, especially the muscles around the eyes and mouth. At times the

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color of the skin will be bluish, although the skin will feel hot to the touch.

Treatment

No time should be lost when a convulsion occurs. The feet should be immersed at once in very warm water, containing a tablespoonful of mustard. If possible, a whole bath containing several handfuls of mustard should be given. This bath should be prolonged about two minutes. The body should then be wrapped in a warm blanket, placed on the bed, and cold cloths or an ice-bag applied to the forehead and scalp.

As a rule, convulsions last from one to five minutes, rarely longer. When the convulsion ceases, and the child is relaxed, lose no time in giving an enema of one pint of soap-water, to relieve the bowels.

Remember, that during a convulsion the jaws are rigid; therefore, the child can not swallow. One should not attempt to give any medicine by the mouth, for there is

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danger of the same trickling into the lungs instead of the stomach.

These instructions are to be followed until a physician arrives. If a second convulsion occurs before the physician arrives, repeat the mustard bath, and again apply ice to the forehead and scalp.

Recurring
Convulsions

In prolonged convulsions it may be necessary for the physician to use a few drops of chloroform or ether by inhalation to control the spasm. This, however, must not be attempted by the family without the presence of a physician or a trained nurse, as there is danger of asphyxia when proper precautions are not taken.

Convulsions in children usually indicate the beginning of a disease. Diseases like pneumonia, typhoid fever, whooping-cough, and meningitis may be ushered in with a convulsion. This convulsion is the effect of the poison (toxin) on the nerve centers. In

HEALTH-CARE OF THE GROWING CHILD

pneumonia the pneumotoxin develops in the blood, and this causes the convulsion.

When a child has a convulsion it should be put to bed and kept there for observation. Sometimes a few days will pass before a disease appears. If the convulsion is simply an explosion due to an overloaded stomach, the child, after a brisk cathartic and rest, will be normal in a few days. We should always remember that if a child has once had a convulsion he may have a recurrence of the same.

Concussion

If a child falls and strikes his head, a convulsion may occur. This may be due to a concussion or jar of the brain, but it may also be due to meningitis or brain-fever. Such cases are not necessarily fatal. Children fall and strike their head many, many times without doing any serious damage. A good plan, however, is to have the head carefully examined after any severe

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fall. If nosebleed, or earbleed, or bloodshot eyes are noticed soon after an injury, or if vomiting takes place, it shows that there has been some disturbance, usually due to the force of the concussion of the brain.

These cases may be serious, but are not necessarily fatal. Children have enormous vitality and can survive many injuries to the brain and skull which would prove fatal to adults. Nature repairs injuries to bones very quickly.

Tuberculous Meningitis

Tuberculous meningitis usually occurs in bottle-babies, in which milk contaminated with the tubercle bacillus was fed during infancy. Such children do not thrive; the skull is large, the veins are very prominent over the forehead and scalp, the nights are restless with crying, and in spite of good care the child does not seem to develop.

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Such children will cry out in a sound sleep, as though frightened, and stare at imaginary objects. They are unhappy, dissatisfied, and always fretful. They perspire at night. They cough without any evidence of lung trouble. Frequently convulsions and rigidity of the muscles are noted. When convulsions recur it is due to an excess of fluid in the brain, causing pressure within the skull. To relieve the same the physician must draw off some of the fluid by inserting a needle into the spinal canal. By this method one-half to one ounce of the spinal fluid can be drawn off. By a laboratory examination we can determine whether or no the child is suffering with tuberculous meningitis, or cerebro-spinal meningitis and at the same time relieve the brain pressure.

Convulsions

There are many conditions in children causing disturbed nights, restlessness, and crying. A pain in the stomach or bowel

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due to overeating may cause colic and symptoms resembling meningitis. Children with flabby muscles and soft bones suffering with mild or severe rickets are easily disturbed and peevish, and scream during sleep. Thus we have irritation causing symptoms which resemble meningitis. We should not make the mistake, therefore, of believing that every child that stares at imaginary objects, or appears frightened, or has enlarged veins over the scalp is suffering with brain irritation or meningitis. A physician must decide this important point.

Night-Terrors

Sometimes children will suddenly awake from a sound sleep and shriek or scream. Very heavy meals at night, with overloaded bowels, will sometimes cause a disturbed sleep. Besides irregularity of meals, worms, and pain caused by kidney stones, an irri-

HEALTH-CARE OF THE GROWING CHILD

tation due to an adherent or elongated prepuce, will disturb sleep.

Ghost stories and too rigid discipline will excite mental impressions which will produce night-terrors. The cause of the frightened scream must be sought by the one in charge, and the same can then be remedied.

Very sensitive, nervous children are more prone to these attacks than the strong, healthy, and robust child.

When night-terrors exist, meat should be stopped, likewise tea and coffee. If children have been given beer, wine, or alcoholic spirits, the cause of such fright-spells is easily determined.

A laxative consisting of one-half teaspoonful of calcined magnesia should be given every morning and the bowels washed with a pint of soap-water in the evening.

Milk, fruit, vegetables, eggs, cereals, and

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fish should be allowed. Meat may be given sparingly.

Paralysis

Paralysis of the arms or legs, or inability to swallow, with regurgitation of food through the nostril, is the form of paralysis usually following diphtheria. Such paralysis usually lasts several months, and the child may recover completely. Now and then a case may persist for a year, but the paralysis, under appropriate treatment, gradually lessens until the child recovers. I have seen cases of *permanent* paralysis of both legs following severe diphtheria, but fortunately this is rarely the case.

Paralysis accompanying scarlet fever or diphtheria comes on slowly and disappears slowly. The cause of the same is the poison or toxin from the disease germs which paralyze the nerve centers.

After a fever in which symptoms of a

HEALTH-CARE OF THE GROWING CHILD

Infantile Paralysis or Poliomyelitis

spoiled stomach are noted, paralysis may suddenly appear. Many children will go to school in the morning, have fever in the afternoon and evening, and awake the following morning unable to walk. The fever subsides quickly. The paralysis remains. There is a gradual waste of flesh which is very perceptible after a few weeks. The arm or leg affected is cold to the touch, and in contrast to the healthy extremity shows marked changes. This form of paralysis lasts throughout life.

Braces and supports have given the best results. Plaster of Paris has been tried with rest in bed and immobilization of the parts, but the results are disappointing. Massage, electricity, and a metallic brace are about the only successful methods in use to-day. If there is shortening of the muscles, then muscle-grafting may be tried.

This form of paralysis requires very skill-

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ful treatment, and gymnastics must form the most important part of muscle education.

I always advise placing such a child under the care of one skilled in medical gymnastics and muscle education, so that the muscle strength can be gradually restored.

Spinal Curvature

Curvature of the spine is met with in both sexes. As a rule, curvatures are caused by weak muscles of the spine. We must therefore expect curvature in those children in whom exercise is neglected.

Faulty position assumed in sitting at school or at home, or standing on one foot, while not the direct cause of a curvature, will aggravate and keep up a curvature that might otherwise improve.

Spinal curvatures are usually associated with bad chest development. Improper

HEALTH-CARE OF THE GROWING CHILD

breathing and flat-chested children go together. One follows the other. An improper development of the chest wall is visible in the front; so will a curvature of the spine, as a rule, be associated with faultily developed chests.

To cure a curvature medicines are useless. The treatment consists in the development of the chest wall, and especially of the spinal muscles, which can only be accomplished by gymnastics. Deep breathing exercises, pulley weights, dumb-bells, rowing, and especially swimming, are samples of exercises best adapted to develop both sides of the chest and spine.

It is best, however, if a curvature exists, to take the child to a specialist and have him prescribe the exercises to be followed in a gymnasium. The measurements of the child should be taken, so that the progress of development can be noted. Spinal curva-



Spinal Curvature caused by Faulty Position at School. Required two years of systematic gymnastics to effect a cure.

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tures can be cured unless we are dealing with bone disease such as tuberculosis of the spine.

Headache

When a child complains of headache, we should suspect constipation or stagnation of the intestinal contents. When poisons from the bowels are absorbed into the body, they give rise to violent headache. Such putrefactive conditions will cause an auto-intoxication. If, however, the bowels are regular and there has been no imprudence in eating, the temperature should be taken. If there is any fever, the child should be put to bed. Headache may mean constipation, but it may also mean the beginning of an acute infection, like influenza, scarlet fever, measles, diphtheria, or typhoid. It also frequently precedes an ear abscess. Eye-strain is a frequent cause of headaches in schoolchildren. We should always ques-

HEALTH-CARE OF THE GROWING CHILD

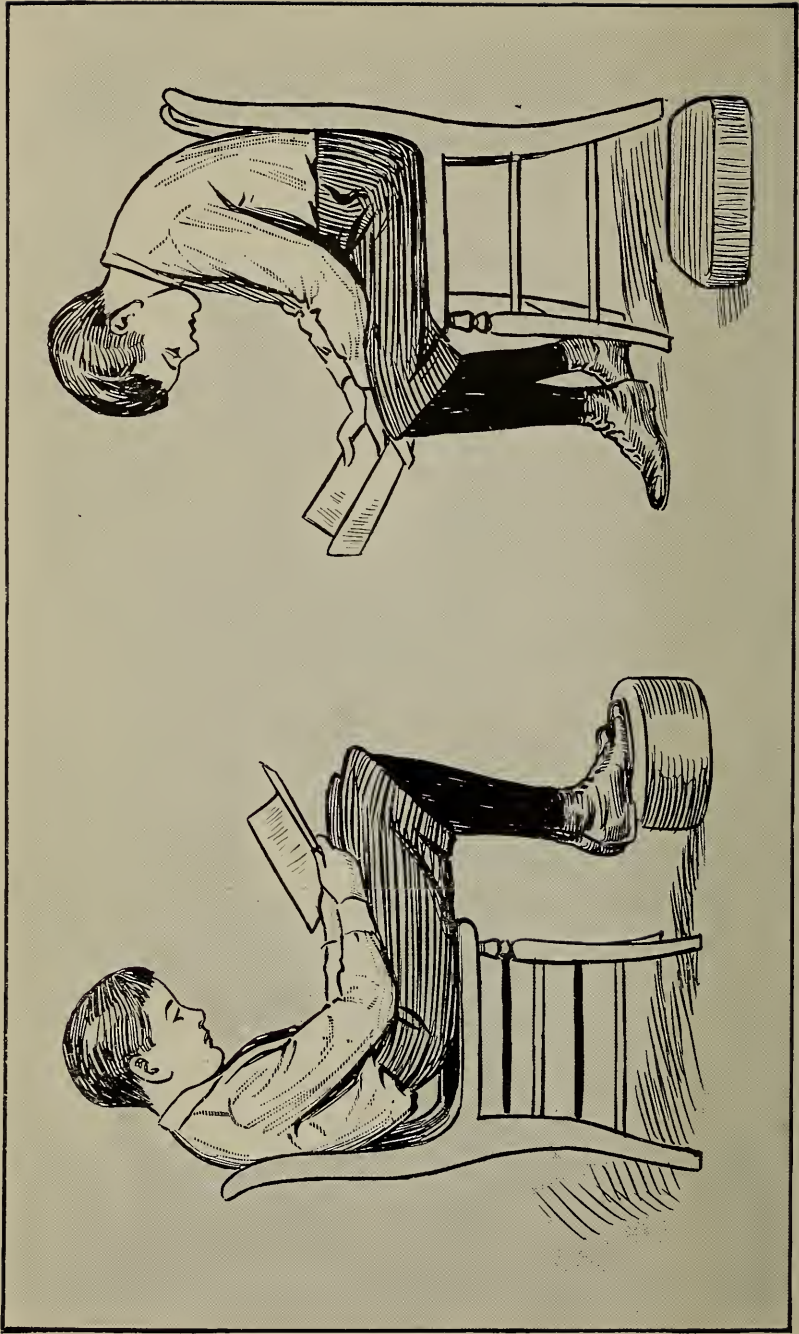
Eye-Glasses

tion the child as to what portion of the head aches, and note if it is over the eyes, and if it follows reading or studying. If the headache disappears when the child rests, such headache may be caused by eye-strain. Such children usually suffer with astigmatism. Their eyes should be examined by an oculist, but not by an optician. The muscles of accommodation in the eye are very sensitive, hence only one skilled in testing eyesight should undertake such a delicate examination.

Every optician sells eye-glasses, and it is to his advantage to enlarge his trade, but the delicate eyes of a child can be ruined if improper lenses are fitted to them.

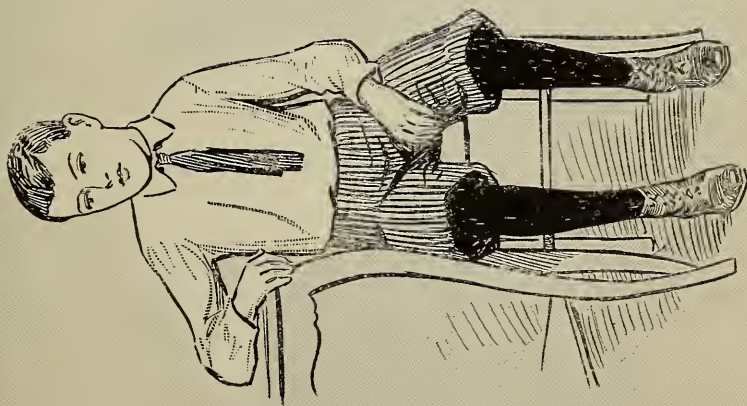
Some children require glasses for reading only, others may require two sets of glasses—one for distance-sight, the other for reading and writing.

When girls between twelve and fifteen

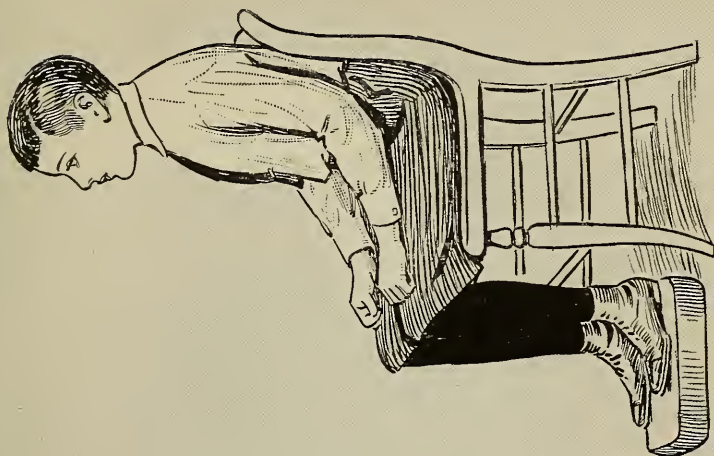


Faulty position resulting in round shoulders and flat chest

In this position the child develops round shoulders.



Incorrect Sitting Position.



Correct Sitting Position.

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years complain of headache, one should bear in mind that menstruation is frequently preceded by headaches and also by nose-bleed. Recurring headaches at intervals of several weeks should always remind the mother of the approaching menstrual flow, if the girl has already begun to menstruate. If there is a cessation of the flow and an interval of two or three months has passed since the last flow, headaches will frequently occur. Such headaches are caused by an overfilling of the blood-vessels of the brain, and can best be relieved by giving a hot mustard foot-bath. Nose-bleed frequently occurs when menstruation is delayed.



PART V

MISCELLANEOUS DISEASES AND
AFFECTIONS

OPERATIONS IN CHILDREN

BEFORE deciding upon any surgical operation which necessitates the administration of an anesthetic, there are a few points which have an important bearing on the outcome of any case.

We should be positive that the child is not a "bleeder." This can be easily ascertained by the physician. A specimen of blood can be sent to a laboratory to find out in what length of time coagulation takes place. By this means the physician learns whether or no the child is a "bleeder." The mother or nurse can also help to elucidate this point by noting if bleeding of an unusual amount results after the extraction of a tooth or after a pin-prick or slight cut. If

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when bleeding occurs it is stopped with difficulty, the child has a tendency to bleed, and the same should be reported to the physician or surgeon.

The Kidneys

An equally important point is to have the urine examined so that we can learn whether or no kidney-disease exists. If albumin is found in the urine, the same should be remembered, for it will have a bearing on the choice of an anesthetic.

Bronchitis

A tendency to bronchitis should be mentioned. If there is a tendency to bronchitis, the use of ether as an anesthetic is contraindicated, as the ether will irritate the bronchial tubes.

A weak heart or heart-disease requires caution in using nitrous oxid or chloroform. It is safer to have a physician present during a nitrous oxid anesthesia, even though only a tooth is extracted—if heart-disease exists.

HERNIA

HERNIA

A hernia is a loop or fold of intestine which passes through the muscular structure of the abdomen. It is easily seen and felt in the groin on either side as a round or irregular mass which protrudes and gets larger on coughing or pressing.

Girls as well as boys are easily ruptured by active athletics. When children overstrain they are liable to rupture. Many children have a tendency to rupture because of soft, flabby muscles. Children who have suffered with rickets are easily ruptured. Children whose muscles have been strained by violent fits of coughing, as in whooping-cough, are easily ruptured.

The rupture always comes down when the child is on the toilet, especially if it strains its bowels. Such rupture is called an inguinal hernia. Boys frequently have a large

HEALTH-CARE OF THE GROWING CHILD

swelling or rupture which enters the sac containing the testicles. It consists of a fold of intestine forced through the inguinal ring.

The treatment in these cases consists in keeping the bowels so loose that the child need not strain. Constipation is frequently at the root of this trouble. A truss should be fitted to the parts so as to support and prevent the rupture from protruding.

Bread, cake, pies, pastries, and foods giving hard and formed stools must be avoided during treatment.

A child having a rupture should be taken to a physician so that the mother can learn how to prevent the rupture from being strangulated.

GLANDS

Lymphatic Glands

Glands are small, oval bodies about the size of an almond. In health they give off

GLANDS

secretions; for example, the saliva comes from the salivary glands in the mouth. During fever the mouth is dry, and the lips are parched, because the glands do not perform their function.

Intestinal glands during fever do not give off secretions, or only a very small quantity; consequently we have constipation or dryness of the stool.

Glands are found in almost every part of the body. We have bronchial glands, stomach and intestinal glands, also throat-, nose-, and mouth-glands. When inflamed they swell to two or three times their normal size. Swollen glands usually indicate a nearby inflammation. When the glands swell at the lower jaw or behind the ear we should examine the mouth to see if the child has an abscess at the root of a tooth or on the gum. There may be a swelling at the back of the throat, or the tonsil may

Enlarged
Glands

HEALTH-CARE OF THE GROWING CHILD

be inflamed or have an abscess developing. In many instances the swelling of the glands will continue, and the gland itself break down and result in an abscess.

If there is an eczema on the scalp due to head-lice, the glands in the back of the neck near the roots of the hair will be swollen. Inspectors of schoolchildren invariably examine the back of a child's head near the neck in order to determine the hygiene of the scalp. Glands will also swell in many other diseases which will be described elsewhere.

Tuberculous Glands

Tuberculosis frequently shows itself by an enlargement of the glands under the jaw and neck. These glands enlarge and remain swollen for months and years even though diseased tonsils and adenoids are removed. There is but one treatment for this condition and that is to remove them. When an abscess forms in a tuberculous gland the



Tuberculous Glands of the Neck, behind which diseased tonsils and adenoids were found.

GLANDS

pus should be evacuated as soon as possible. I have already mentioned the absence of fever in tuberculous glands in the article on tuberculosis. The same treatment that is given for other tuberculous conditions (see chapter on tuberculosis) is indicated.

The body must be fortified with the aid of concentrated food, such as milk, cheese, eggs, fruits, and vegetables. Cakes, pies, puddings, and candies should not be given, or only in moderation. To assimilate the food, fresh air and outdoor life are demanded. This will sharpen the appetite and aid digestion. An outdoor life, with porch-sleeping, soothes the nervous system and promotes sleep. The constant supply of oxygen taken into the lungs when awake and during sleep strengthens the blood, gives resistance to the body, and eventually helps to cure the disease.

To throw off the poison from the skin and

HEALTH-CARE OF THE GROWING CHILD

glands it is necessary to resort to daily baths. A tepid bath followed by a cold shower and brisk massage will stimulate the circulation and help to restore good health. Medicine alone will not cure tuberculosis.

FAINTING

Attacks of syncope are frequently seen in children when riding in cars. The jarring of the train will disturb the brain and nervous system so that a faint or nausea and vomiting may result. A sudden shock or fright will sometimes cause a disturbance of the circulation resulting in a faint. Indigestion may cause a fainting-spell, while at the same time there will be a cold perspiration of the hands, feet, and forehead. There is danger unless the circulation is quickly restored.

The child should be undressed and put

FAINTING

to bed. Massage or rub the region of the heart around the left nipple for a few moments. The feet should be immersed in hot water. Care must be taken that the feet are not scalded. Five to ten drops of whisky or brandy or aromatic spirits of ammonia should be given and repeated every five minutes until three doses have been taken. The face should be sponged with alcohol and water or with Florida water every few minutes.

Even though the child craves drink avoid giving large quantities of liquids. Thirst should be quenched by giving small pieces of cracked ice with or without brandy.

After the child is revived discontinue foot-baths and let him rest. Hot coffee with milk will assist in steadying the heart-action and prevent the recurrence of such fainting-spells.

If the abdomen is distended give an

HEALTH-CARE OF THE GROWING CHILD

enema of one pint of soap-water. By relieving the bowels we remove the pressure on the diaphragm which lies directly under the heart.

No child should be permitted to walk for at least one day after an attack. Rest is demanded so that the heart shall not be overstrained.

COLD HANDS AND FEET

Cold hands and feet are caused by an insufficient supply of arterial blood to the extremities. If circular garters are worn, or if stockings, shoes, and gloves are worn very tight, they will interfere with the circulation of the blood to the extremities. Insufficient exercise and anemia are also reasons for this condition.

The treatment consists in briskly rubbing the hands and feet with cold water, followed by dry massage. Walking or jumping for

HICCUP

several minutes will stimulate the circulation.

If the child is anemic an iron tonic will be necessary. Warm drinks, such as milk, broth, or gruel may be given every three or four hours.

HICCUP

Hiccup is due to a spasm of the diaphragm. It is usually provoked by gas or by something that has been swallowed which irritated the lining of the stomach. Cream and foods rich in fat frequently cause hiccup.

A tight-fitting abdominal bandage will frequently check the spasm. One-fourth teaspoonful of bicarbonate of soda in a teacupful of warm water may be repeated every half-hour until the spasm is controlled.

If the spasm persists in spite of this treatment try firm pressure with the thumb

HEALTH-CARE OF THE GROWING CHILD

over the stomach immediately under the breast-bone. This firm pressure should be continued for at least one minute.

FOREIGN BODIES IN THE EAR

Bugs, insects, beads, and other foreign bodies will sometimes accidentally lodge in the ear. Most objects can be dislodged by dropping in the ear a few drops of warm sweet- or olive-oil. If the foreign body can not be dislodged by this means, place the child in a sitting posture, and irrigate the ear with one quart of warm water, using a fountain-syringe and glass nozzle. The bag should be hung no higher than two feet above the child's head.

Do not probe the ear with a hairpin or any sharp instrument, but take the child to a physician if the foreign body is not easily dislodged.

EARACHE

EARACHE

In the back of the throat on each side near the tonsils is an opening leading into the middle ear. This is called the Eustachian tube. Pus-germs from the nose and throat frequently enter and set up an inflammation resulting in an abscess. We should always bear in mind the danger of an extension of the catarrhal inflammation from the back of the nose and throat into the middle ear, when children suffer with tonsillitis or catarrhal or influenzal fevers.

When cold in the head or catarrh in the nose and throat persists a long time, or if they constantly recur, it is better not to experiment with home remedies but to have the child carefully examined by a physician to determine the origin of the trouble. In nine cases out of ten adenoids will be responsible for the frequent colds. Shall we let earache and ear-discharge continue and

HEALTH-CARE OF THE GROWING CHILD

cause worry when a simple operation devoid of danger can cure this trouble?

Violent blowing of the nose may result in earache. A catarrh will frequently extend through the nose and throat and give rise to earache. Earache without fever need occasion no alarm. Earache is an early symptom of measles.

Warm olive-oil may be dropped into the ear, and the ear plugged with cotton. A warm water-bag should be placed over the ear. Gargling the throat with warm salt water, one-half teaspoonful of salt to a cup of warm water, every fifteen minutes is beneficial. If the child is not relieved by this simple means a careful examination of the ear must be made by the physician to determine the cause of the trouble.

A simple catarrh of the middle ear if neglected may extend to the mastoid cells causing inflammation which may prove fa-

PINKEYE

tal. An early incision in the drum will frequently prevent a mastoid inflammation.

PINKEYE

This infectious disease is caused by a germ. The blood-vessels of the eye swell. Because of the number of engorged blood-vessels the eye assumes a pink appearance, hence the name pinkeye. The eyelids have a discharge which will frequently glue them together so that the eye can not be opened after the night's rest.

Owing to the contagious nature of this Isolation disease the patient should be isolated and all cloth or cotton coming in contact with the eyes should be burned. Towels should be boiled after being used, so that all germs are destroyed. The eyes should be protected with smoked glasses or the child kept in a darkened room. Reading should be prohibited. The heat and smarting in the

HEALTH-CARE OF THE GROWING CHILD

eyeballs can best be relieved by the application of gauze saturated with warm boracic acid solution which should be changed every five or ten minutes during the day. At night borated vaseline applied to the eyelids will prevent them from sticking together.

STIES

This is a very common infection and occurs on the upper and lower eyelids. The application of lukewarm lead-water on gauze covered with oiled silk and bound on with a handkerchief quickly relieves. The dressings should be changed once or twice every hour. If pus forms and the lid is very much swollen, it may be necessary, in rare instances, to sterilize a needle by holding it in an alcohol flame and open the head of the pustule to let the pus out.

FEVER-SORES

TRACHOMA

This is a highly contagious disease which appears as a number of small elevations under both eyelids. Children contract the same in schools or wherever crowded together.

Medical inspectors in schools always evert the eyelid to look for this infection.

The illustration shows the type of the disease most common among schoolchildren. Every mother can with care learn to detect it.

Severe complications may follow if these cases are neglected. The treatment is too complicated for any mother to attempt.

FEVER-SORES

When the stomach is deranged or food ferments and stagnates in the intestine we will have fever. After the fever is over blisters will be seen in the mouth or gums

HEALTH-CARE OF THE GROWING CHILD

and especially around the lips. They are the external manifestation of the poison generated by the inflammation within the body. These sores are frequently found on the body as well as on the face.

One or two teaspoonfuls of rhubarb and soda mixture can be given every three hours for two days. A paste consisting of bicarbonate of soda and cold water is cooling and reduces the swelling. It should be rubbed into the sore twice a day.

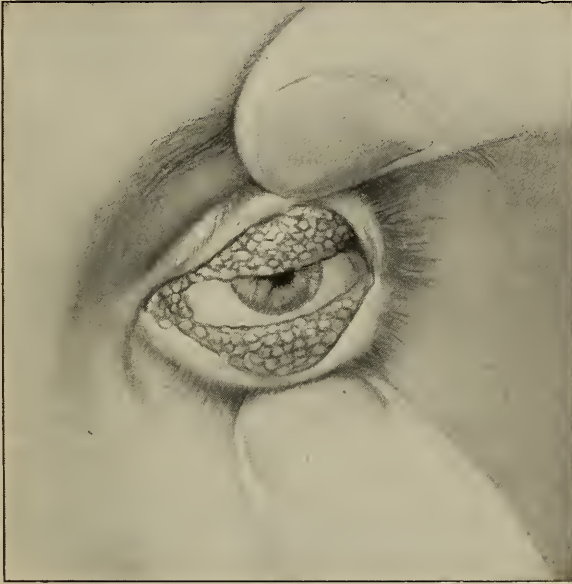
Camphorated vaseline or camphorated ice is soothing. Neither meat, eggs, nor cereals should be given for three days. The diet should consist of milk, fruit, and fresh vegetables.

INJURIES

Bruise or Cut

If a child falls the injury may result in a black and blue mark known as a bruise.

If the skin is broken the wound should be



Trachoma of both Lids. A serious eye-trouble. Very contagious.

INJURIES

washed with absorbent cotton dipped in boiled water. No ordinary house wool should be used, nor should cotton be used that has been exposed to dust or to the air. Sealed package cotton must be used. If there is bleeding, moisten the cotton with peroxid, using one teaspoonful of peroxid to one teaspoonful of boiled water.

If there is swelling or redness, which is inflammation, apply gauze saturated with diluted cold lead-water. In the absence of lead-water, gauze may be saturated with witch-hazel or with plain iced water. If dirt or dust has entered the wound it should be washed with a 1 to 5000 bichlorid solution. There is always danger of infection from germs that enter the lacerated skin. In this way erysipelas or tetanus germs may produce fatal results.

Swelling or
Inflammation

If the wound is infected through improper treatment and fever develops there

HEALTH-CARE OF THE GROWING CHILD

is danger of blood-poisoning. Do not risk a child's life by experimental antisepsis, and, having given first aid to the injured, call a physician.

Any person handling a wound, no matter how slight, must see that the hands are thoroughly scrubbed and the finger-nails absolutely clean.

Burns

Scalding the skin with hot water or steam will produce blisters and redness of the neighboring parts. If the burn is mild the blisters should be opened with a clean needle, and the loosened skin removed with sterilized cuticle-scissors. Apply linseed-oil and lime-water in equal parts. If the linseed-oil and lime-water are not at hand, cold cream, corn-starch powder, flour, or stearate of zinc may be thickly sprinkled over the burn and covered with crossed strips of oiled silk, over which gauze and a bandage should be placed. The dressing is

INJURIES

to be changed at least once a day, the same treatment being carried out each time.

If a splinter becomes imbedded in a Splinters child's flesh it should be picked out with a sharp needle. To sterilize the needle, pour five or ten drops of alcohol in a saucer in which the needle is placed, then set fire to the alcohol. With this sterilized needle pick out the splinter, beginning at the point of entrance. Saturated boric acid solution should then be applied overnight.

Children will often miscalculate distances Fall or Sprain and cause painful though not dangerous wounds by a fall or misstep from a car, curb, or any height, and especially in scaling fences.

The treatment consists in having the child rest as much as possible. Apply an ice-bag during the day. At night saturate a piece of gauze with tincture of arnica and apply to the affected part. A tight-fitting ban-

HEALTH-CARE OF THE GROWING CHILD

dage over the wet gauze will support the affected parts and bring relief.

As a rule a sprain of this character will last several days ; if however the pain continues it may be necessary to call a physician to determine the nature of the injury.

To Stop Bleeding

If a child is cut and blood spurts like a jet an artery has been cut. If the blood oozes and is bluish-red in color, a vein has been severed. A clean linen handkerchief should be tied around the part and a strip of clean linen or sterile gauze of half a dozen thicknesses should be pressed over the wound. Styptic cotton or styptic wool, if handy, can be applied directly to the bleeding, using a tight bandage or handkerchief to hold it in place.

When arteries are cut it may be necessary to tie them. In such a case call a physician.

NOSEBLEED

NOSEBLEED

Violent exercise or injury to the nose will sometimes cause nosebleed. Many children will suddenly have a flushed cheek and associated therewith nosebleed. There is a decided difference between nosebleed of this character and nosebleed resulting from a swelling called a polypus in the nostril. *Polypus* In the latter case a swelling exists, the nostril is obstructed, and there is difficulty in breathing. There will also be very frequently recurring nosebleed.

To check nosebleed ice-cloths or a piece of ice wrapped in cheese-cloth should be held at the root of the nose between the eyes. Firm pressure on the upper lip under the nostrils for from ten to twenty seconds will sometimes check the bleeding.

The child should be placed in an upright position, and the feet immersed in hot water. Styptic or plain absorbent cotton

HEALTH-CARE OF THE GROWING CHILD

may be used to plug the nostril. Small bits of cracked ice may be swallowed. No warm food should be given.

If the attacks recur frequently, a physician should be called to determine the cause. Constitutional treatment may be necessary. It is very important to learn if the child is a "bleeder." This condition has been referred to in the article on Operations in Children.

WORMS

Worms enter the body chiefly through food. The most common form of worm is the pinworm or threadworm. We also frequently see the roundworm. Older children are more subject to the tapeworm.

Pinworm

The pinworm is usually found in the stool mixed with a catarrhal discharge from the bowels. Children so affected are nervous, restless, and have an itching around the

WORMS

anus. They are uneasy and do not sit long in one place.

When there are very many worms, they disturb the nervous system, so that frequently their presence has been known to cause convulsions. In little girls these worms will frequently crawl from the rectum into the vagina. Many cases of vulvitis and vaginitis, consisting of an inflammation of the external genitals, are thus caused by worms. Their presence will cause itching which may ultimately lead to masturbation.

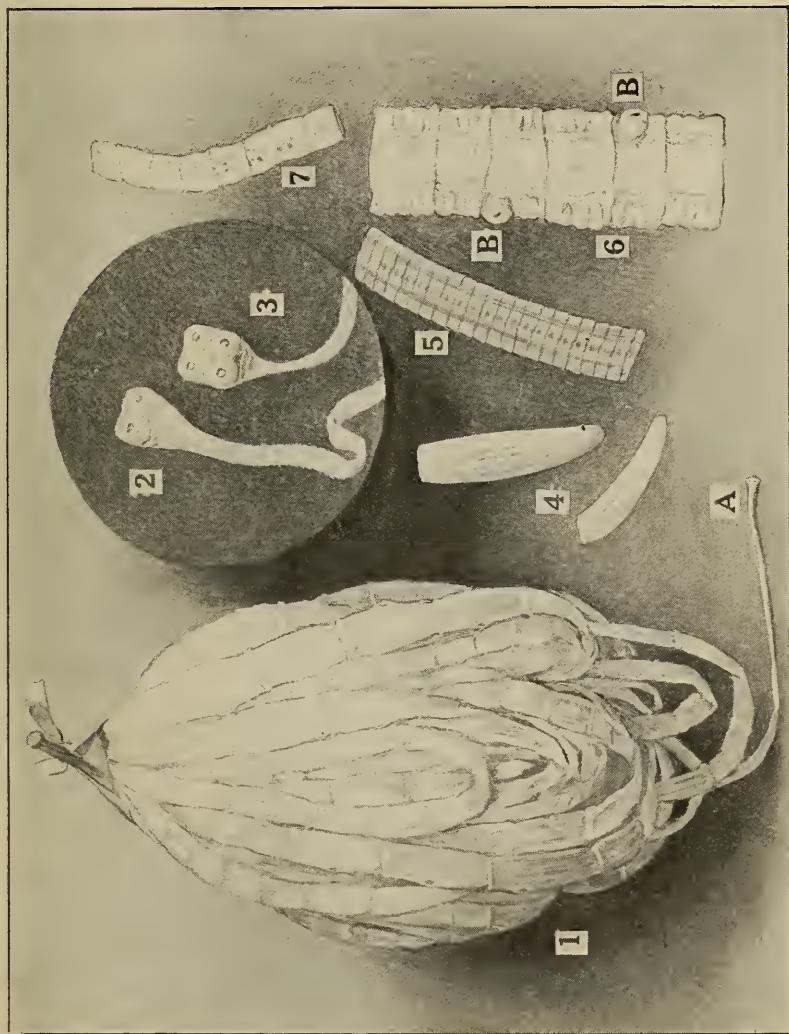
These worms resemble spool-cotton and can easily be removed by giving an enema of a teaspoonful of salt to four ounces of water twice a day. One grain of santonin and one-fourth grain of calomel should be given at bedtime for three successive nights, and each morning two teaspoonfuls of rhubarb and soda mixture should be given.

HEALTH-CARE OF THE GROWING CHILD

Compound licorice-powder may be substituted in one-half teaspoonful doses.

Roundworm

This worm is reddish or reddish-yellow and from five to ten inches long. It is found in the smaller intestines in children between the second and tenth years. Some children may have five or six, others a dozen or more. I have seen these worms passed with the stool. Occasionally they are vomited with the food. Frequently their presence is not associated with any definite symptom. They may cause restlessness and itching of the anus, grinding of teeth, colic, or diarrhea. The children have restless nights and frequently complain of pain in the stomach or abdomen. Such children are not able to locate the exact spot where the abdomen hurts. They will have a pain on the left side one day and on the right side the next day. They are sensitive, dissatisfied, and hysterical.



1. Complete Tape-worm; A, Head of Tape-worm; 2 and 3, Magnified Heads; 4, 5, 6 and 7, Segments of Tape-worm.

WORMS

The eggs of these worms can be detected in the stool, and as long as they are present more worms should be suspected, even though a dozen or more have been passed.

One of the best remedies is the oil of chenopodium, five drops on sugar, three times a day for a child ten years old. Repeat the dose on the following day. On the third day give a teaspoonful of compound licorice-powder. If this is effectual repeat the treatment three times, at intervals of ten days.

Tapeworm enters the body by means of Tapeworm food containing the larvæ or eggs. The eggs are found in pork, in beef, and in fish. A worm develops in about three months. When the terminal segments are mature they separate and are discharged in the stool. As each segment contains both male and female organs, each one is capable of regenerating a whole worm. For this rea-

HEALTH-CARE OF THE GROWING CHILD

son the treatment of tapeworm will never be successful until the head and every segment has been expelled. Tapeworms are estimated to live from ten to twenty and possibly thirty years.

The beef tapeworm is most frequently found in children. It has four suckers, a square head, and no hooks. Raw beef may contain the eggs of the worm.

The pork tapeworm is rarely found in children. The head has four suckers surrounding which there is a circle of about twenty-six hooks. The length of the worm varies from ten to fifty feet.

In older children we will notice colic, restlessness, and foul breath. In spite of an abnormally large appetite the body is poorly nourished and sometimes wastes. Many of these cases have been supposed to suffer with tuberculosis.

The presence of the worm is easily de-

WORMS

tected by the large white segments of the worm that can be seen in the stool. These segments are white, flat objects resembling a piece of tape.

The expulsion of the worm is difficult. Even though the body may have been expelled, unless the head is dislodged and removed the worm will grow and redevelop.

The treatment should be left in the hands of a physician. It consists in dieting with salt herring, onions, and garlic, which sickens the worm. This diet is followed by a large dose of *felix mas*. The dose, and frequency of the same, and danger of giving an overdose of this specific drug are too important for the average mother to undertake; hence the physician should be consulted.

In the South, and occasionally in the North, hookworm exists. The worm enters the system through the soles of the feet and

Hookworm

HEALTH-CARE OF THE GROWING CHILD

finally lodges in the intestinal tract. The worms produce a profound anemia and paleness of the skin. There is swelling of the feet and ankles, and puffiness of the face. There is loss of weight. In the stool the eggs of the hookworm can be found. If we are living in the locality where hookworm exists and the child shows the above named symptoms, no time should be lost in placing the child under the care of a competent physician.

BED-WETTING

This is a very common occurrence in childhood. In some cases it is due to indifference on the part of the child. In other cases it is due to an irritation or weakness of the bladder-muscles which do not retain the urine but allow it to trickle away. Many children wet by day as well as by night. Local irritation, such as a tight foreskin,

BED-WETTING

very acid urine, adenoids, or general weakness of the bladder are the common causes in boys as well as in girls.

If bed-wetting follows an attack of influenza or if it follows diphtheria, then probably paralysis of the bladder-muscles may be the reason for the same.

The treatment consists in giving small quantities of liquids at supper. Cold spinal douches should be given morning and evening. The foot of the bed should be elevated. Meat should be allowed only every other day. Drugs such as strychnin must not be given without the advice of a physician. Toning up the muscles with electricity is frequently serviceable. The urine requires chemical examination, to see if too much acid may not be the cause of the bed-wetting.

HEALTH-CARE OF THE GROWING CHILD

RETENTION OF URINE

The retention of urine is a serious matter. The healthy child should pass about one quart of urine in twenty-four hours, but this quantity may vary with the amount of liquids taken. When solid food is taken there will be less urine passed than when liquid food is taken. During fever and in diseased conditions the kidneys sometimes act sluggishly.

Fifteen drops of sweet spirits of niter may be given in water and repeated three times a day. If the kidneys do not respond and the urine is still suppressed, a warm hip-bath should be given for three minutes. Dry cups may be applied over the region of the kidneys once or twice a day. A warm water-bag may be applied to the small of the back or the abdomen. If the child does not respond to this treatment a physician should be called.

LEUCORRHEA

LEUCORRHEA

A white milky discharge or a yellowish-white discharge from the female genital tract is known as leucorrhea. It may be the result of a general systemic weakness. It may also be due to threadworms crawling from the rectum into the vagina. Scratching and rubbing so-called thigh-friction will irritate and inflame the parts, giving rise to leucorrhea.

After measles, diphtheria, influenza, and especially scarlet fever, leucorrhea is frequently noted. It may then be considered as a complication resulting from the disease with which the child suffered. Leucorrheal discharges are occasionally carried from the mother or nurse to the child by sleeping in the same bed.

This condition should not be neglected, and modesty should not prevent the mother from taking the child to the family physi-

HEALTH-CARE OF THE GROWING CHILD

cian for treatment. Now and then a child may be infected by using a dirty toilet-seat in a public school or hotel.

If the discharge persists in spite of mild treatment a complete laboratory examination of the discharge should be made to determine its nature and the treatment required. Sitz baths of two teaspoonfuls alum and four gallons water are beneficial.

If in spite of local irrigations of alum-water leucorrhea persists, tonics such as iron or codliver-oil should be given. A change of air from the city to the country is desirable, preferably to the sea, for sea-baths will prove beneficial.

Every mother should know that there is great danger of infecting the eyes. She should instruct the child to thoroughly wash its fingers after going to the toilet. A light pad should be worn, and changed several times a day, and burned after using.

FISSURE OF THE ANUS

The child should sleep alone. The discharge may be communicated to others.

FISSURE OF THE ANUS

This is a painful condition of the rectum that is occasionally met with in children. They will complain of pain during stool. Now and then the fissure will bleed during a movement.

On separating the folds of the anus (outside rectum) one or more grooves of inflamed flesh will be seen. Into these fissures particles of stool enter and cause irritation. Hardened lumps of stool will frequently be the cause of fissures while passing through the anus.

The intense itching causes the child to scratch by day as well as during the night. If the fingers or finger-nails are not clean an infection may take place giving rise to an abscess.

HEALTH-CARE OF THE GROWING CHILD

The treatment consists in keeping the parts clean, for which purpose a bath of soap-water applied with absorbent cotton after each movement of the bowels is required. Zinc-salve or cold cream should then be applied. At times fissures of the anus will bleed and require cauterizing with nitrate of silver.

A bland diet, consisting of milk, cheese, fruit, vegetables, and bread and butter, should be given. Meat, fish, eggs, and cereals should be omitted from the diet until the fissures have all healed.

POISONS AND ANTIDOTES

It is self-understood that no mother or nurse should take the responsibility of caring for a child that has been poisoned or in which symptoms of poisoning are suspected. Rapidity in eliminating the poison may be the means of saving the child's life;

POISONS AND ANTIDOTES

hence in every case of poisoning a physician should be summoned. Certain symptoms can always be noted by a physician which may be overlooked by the layman. For instance, the condition of the heart, the pulse, the pupils, the extremities, whether or no they are rigid, cold hands and feet, and convulsions, all of these symptoms indicate the condition of the system.

Until the physician arrives, no time should be lost and the following suggestions carried out: Accidents in which poison has been swallowed usually call for the speedy production of vomiting. Poisons act very quickly unless they are neutralized or diluted. If possible a teaspoonful of ipecac should be given and repeated every five minutes until vomiting is produced. Emetics

If an acid has been swallowed olive-oil or one teaspoonful of bicarbonate of soda in a teacup of water should be given.

HEALTH-CARE OF THE GROWING CHILD

Warm or cold milk if given soon after any poison has been swallowed will dilute the same.

If an overdose of medicine such as paregoric or laudanum has been given, give half a teacupful of black coffee as soon as possible.

If a liniment or some patent medicine has been given by mistake, give the child a half cup of black coffee and fifteen minutes later a teaspoonful of sirup of ipecac.

If carbolic acid or oxalic acid has been swallowed give one or more wineglassfuls of olive-oil.

If the child is drowsy from an overdose of paregoric or a sleeping-mixture, give a mustard foot-bath by using a tablespoonful of mustard to a pail of warm water, bathing the feet two minutes. Also give a cup of coffee to which two teaspoonfuls of whisky have been added.

POISONS AND ANTIDOTES

A child that is drowsy should be supported under its arms and made to walk in the open air in order to revive him. A cold cloth to the head and sponging the face with Cologne or Florida water, or the inhalation of ammonia-vapor will help to revive the child.

If in spite of this treatment the child remains drowsy, an injection of a pint of water containing one teaspoonful of table salt should be injected into the rectum at a temperature of 115 degrees. If possible a high enema should be given, the soft rubber tube being inserted six to eight inches.

APPENDIX

Appendix

FOOD RECIPES

MILK is frequently used as a drink by school-children. If the milk is certified or pasteurized it is safe, not otherwise. My advice therefore is to give school-children a bottle of pasteurized milk and keep it warm in a thermos bottle until lunch hour.

If the source of the milk is unknown it is safer to steam the milk twenty minutes or, if the child is not constipated, the milk may be brought to the boiling-point.

When milk has been steamed it should be cooled rapidly and placed in a refrigerator until it is used. If milk is exposed to the air and not properly cooled in a refrigerator it will easily be contaminated.

The danger in milk consists in the ease with which tuberculosis, typhoid, or diph-

HEALTH-CARE OF THE GROWING CHILD

theria germs can be conveyed by its use to the healthy child. These germs multiply and thrive in raw milk. They are destroyed and lose their vitality when milk is boiled or steamed.

Peptonized Milk

Peptonizing powders are digestive agents sold in glass tubes or in tablet form. They are composed of pancreatin and bicarbonate of soda. The contents of a peptonizing tube or a tablet should be dissolved in a tablespoonful of cold water, and a quart of milk added. Place this milk containing the powder in a pot of hot water at a temperature of about 110 degrees, leaving it there for ten minutes. The milk must then be quickly brought to the boiling-point, and placed in a pot of cold water, to prevent further peptonization. Bringing the milk rapidly to a boil will kill the digestive ferment, thus avoiding a bitter taste.

For each large cup take a teaspoonful of

FOOD RECIPES

cocoa and a teaspoonful of sugar; mix to a paste with a little boiling water or milk; add balance of milk, or milk and water, as richness is desired. Boil one minute, as boiling improves the flavor.

Cocoa

Take the beaten yolk of one egg and add to it the juice of one-half lemon. Let stand five minutes, thus drawing off the raw taste of the yolk of egg. Add one teaspoonful of sugar and eight ounces of water.

Yolk of Egg
Lemonade

Take the juice of one orange and one ounce of water, and insert an egg-whisk. When the orangeade is in full agitation add slowly the white of egg. Continue the whisking for one or two minutes. Add one-quarter teaspoonful of sugar.

Albumenized
Orangeade

Heat six ounces of milk to a temperature of 150 degrees, but do not allow it to boil. When cold beat up a fresh egg in a tumbler with some sugar, add a few drops of vanilla, and fill up the tumbler with warm milk.

Egg-Nog

HEALTH-CARE OF THE GROWING CHILD

Chicken Broth

Cut up a small chicken, put bones and all with a sprig of parsley, salt, one tablespoonful of rice, and a crust of bread, in a quart of water, and boil for one hour, skimming it from time to time. Strain through a coarse colander.

Mutton Soup

Cut up fine two pounds of lean mutton, without fat or skin. Add one tablespoonful of barley, one quart of cold water, and a teaspoonful of salt. Let it boil slowly for two hours. If rice is used in place of barley, soak the rice in water overnight.

Beef-Juice

Expressed beef-juice is obtained by slightly broiling a piece of lean beef and expressing the juice with a lemon-squeezer. One pound of steak yields two or three ounces of juice. This is flavored with salt and served cold or warm. Do not heat to coagulate the albumin. It is very nutritious and well-taken.

Junket

Add one teaspoonful of liquid rennin or

FOOD RECIPES

one junket tablet to one pint of milk. Mix and heat until the steam rises. Pour into cups and set aside to cool. Flavor with vanilla or pineapple if desired.

Or to a bowl containing eight ounces of cool milk add one teaspoonful of pepsencia (Fairchild). Mix thoroughly. Place bowl in pan of boiling hot water for two minutes. Remove and let stand until jellied.

Beat one egg to a froth and sweeten with two teaspoonfuls of white sugar. Add this to one-half pint of warm milk; then add one teaspoonful of pepsencia (Fairchild); let it stand until it is curdled.

Take one pint of milk and mix with it two tablespoonfuls of corn-starch; flavor to taste, then boil the whole eight minutes. Allow it to cool in a mold.

Break one egg into a teacup and mix thoroughly with one teaspoonful of sugar. Add milk to nearly fill the cup, mix again,

Junket of
Milk and Egg

Arrow Root or
Corn-Starch
Pudding

Custard

HEALTH-CARE OF THE GROWING CHILD

and tie over the cup a small piece of linen. Place the cup in a shallow saucepan half full of water and boil for ten minutes.

Rice Pudding

Boil a teacupful of rice, drain off the water; add a tablespoonful of cold butter. Mix with it a cupful of sugar, a quarter teaspoonful each of nutmeg and cinnamon. Beat up four eggs very light, whites and yolks separately; add them to the rice, and gradually stir in a quart of sweet milk. Butter a pudding-dish, turn in the mixture, and bake one hour in a moderate oven.

Sago Pudding

Same as above recipe, sago being substituted for rice.

Tapioca Pudding

Take one pint of milk, two tablespoonfuls of tapioca, two tablespoonfuls of sugar, one saltspoonful of salt, and two eggs.

Wash the tapioca. Add enough water to cover it and let it stand in a warm place until the tapioca has absorbed the water. Then add the milk and cook in a double

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boiler, stirring often until the tapioca is clear and transparent. Beat the yolks of the egg. Add the sugar and salt and hot milk. Cook until it thickens. Remove from the fire. Add the whites of the eggs, beaten stiff. When cold add one teaspoonful of vanilla.

Thoroughly clean two feet of a calf, cut Calf's Foot Jelly into pieces, and stew in two quarts of water until reduced to one quart. When cold, take off the fat and separate the jelly from the sediment. Then put the jelly into a saucepan with the whites of four eggs. Boil for a quarter of an hour, cover it, and let it stand for a short time. Strain while hot through a bag into a mold. Flavor with lemon.

Cut a young chicken into small pieces, put Chicken Jelly in a saucepan with three pints of water. Cook slowly, removing the grease from top constantly. Allow it to cook about five

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hours. Season with salt, pepper, celery, and parsley. Strain. When cool remove every bit of grease. Serve either hot or cold.

Coddled Egg

Cover a fresh egg with boiling water and let it stand five minutes. Pour off this water; and again cover with boiling water, and let stand five minutes. Remove from shell, add a pinch of salt, and serve. Prepared in this manner the egg will be medium soft, the yolk and white both being of a jelly-like consistency.

Poached Egg

Drop eggs into hot, well-seasoned broth or milk instead of into water. Be careful that the yolks do not break. When heated to a jelly-like consistency, remove and serve on toast. Strain enough of the broth or milk over them to moisten the toast.

Cereals and Gruels

All cereals should be steamed in salted water, at least two hours, in a double boiler. Serve with sugar and cream.

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If cereals are prepared in a fireless cooker they may remain in the cooker overnight.

Scraped beef is prepared by scraping Scraped Beef
with a dull silver knife a piece of raw lean round steak. Season with salt and a little pepper. Serve on toast or cracker.

If preferred the beef may be slightly broiled or heated.

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A sponge-bath is a simple general wash- Sponge-Bath
ing of the body with sponge or wash-cloth and warm water. The child should be undressed completely and put between blankets. The sponging must be performed rapidly and under cover, one part at a time, and drying it before going to another, following the order: face, arms, chest and abdomen, back, legs.

Cold sponging is sometimes ordered to Cold Sponge
reduce fever. A cotton blanket is used.

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One part of alcohol is added to two parts of water, at room temperature. The sponge is saturated and drawn lightly and slowly over the parts. The bath may last from fifteen to twenty minutes and may be repeated every hour if the fever is high.

In eruptive fevers no sponging should be done until a physician has been consulted.

Tub-Bath

No tub-bath is given during illness unless ordered by a physician. It is sometimes ordered to bring out the rash of measles or scarlet fever.

To allay nervous excitement and induce sleep, the bath should be given at 100 degrees. The child may remain in the bath for from five to ten minutes, be dried quickly, and put to bed.

Cold tub-baths and *hot tub-baths* are never given without a physician's order.

Shower-Bath

The shower-bath is an excellent nerve-

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and muscle-stimulant and may be used frequently, especially during the summer.

A *cold shower*-bath should not be given unless ordered by a physician.

In cases of nephritis and to induce perspiration a blanket-bath or hot pack is sometimes ordered. The child is wrapped in blankets wrung out in hot water, and covered with several dry blankets. The pack is usually removed in one hour unless the patient falls asleep. On removing the pack, the body must be dried with a quick alcohol rub, being careful not to expose the child.

Blanket-Bath
or Hot Pack

A mustard-bath is a powerful stimulant and is sometimes ordered when a child is rapidly failing from any cause.

Mustard-Bath

It is sometimes ordered to bring out a rash in eruptive fevers. Mustard is added in the proportion of one heaping teaspoonful to one gallon of warm water. The child

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remains in the bath from two to three minutes.

Soda-Bath

The soda-bath is given for hives and similar skin affections. It is usually given in the form of a sponge-bath, in the proportion of one tablespoonful of bicarbonate of soda to one gallon of water.

Salt or Tonic Bath

The salt-bath when given as a tonic bath should be tepid or cool and followed by a brisk rubbing. One heaping tablespoonful of salt is dissolved in one gallon of water.

Sulfur-Bath

The sulfur-bath is given in rheumatism and to allay itching in various skin-affections. Twenty grains of sulfid of potassium should be dissolved in a gallon of water at a temperature of 100 degrees. A wooden tub should be used, as the sulfur tarnishes metal.

Bran- and Oatmeal-Baths

Bran- and oatmeal-baths are given to soothe an irritated skin. They are made by tying one pound of bran or oatmeal in a

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cheese-cloth bag, scalding it for ten minutes, and squeezing out the milky fluid into a tub of lukewarm water. The child remains in the bath ten minutes.

Wet compresses are frequently ordered to reduce inflammation, as in the cases of sore throat. They consist of thick cloths wet with water and applied to some part of the body. Wet Compress

A warm compress is made by folding a piece of flannel several times, placing it in an open towel, dipping it into boiling water, and wringing out thoroughly by twisting the towel. After testing it against the cheek, it is applied to the patient, covered with a dry towel or piece of oiled silk. Warm or Hot Compress

A cold compress is sometimes ordered to relieve a congested headache, for inflammation or for sprains. It is made of several layers of linen dipped in cold water, wrung out, and applied to the affected part. Cold Compress

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If an intense cold is desired, two parts of ice-water and one part of alcohol are used. The compresses are changed every few minutes.

Ice-Bag

An ice-bag is sometimes used instead of the iced cloths. The ice should be shaved and packed in the ice-bag. If cracked ice is used, a cup of hot water should be poured over the ice to melt off the sharp edges. The rubber ice-bag should never be filled more than half. As much air as possible should be expelled by twisting the top of the bag before applying the screw-cap.

Dry Heat

Dry heat is most conveniently applied by means of hot-water bags. These rubber bags may be bought of all sizes, from three to four inches long, which are so useful in earache or toothache, to the large ones holding two to three quarts.

If one wishes to apply heat to the feet, the bag may be *filled* with hot water. If the

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bag is to be applied to the abdomen where weight or pressure is to be avoided it should be filled to one-half its capacity, and all the air pressed out before putting in the stopper. Screw in the top very firmly, being careful to have the rubber washer in place. Evert the bag, to see if there is any leak. Before applying the bag cover it with a piece of flannel securely sewed in place, or slip it into a flannel bag which can be securely tied. These rubber bags must be frequently tested or examined, as they sometimes break and scald the patient.

In cases of backache there is nothing so comforting as a hot-water bag. In headache and many cases of toothache one of the small bags, filled with ice-cold water and applied to the cheek, the head, or the back of the neck, will give great relief.

In an emergency, bags of salt, bricks, or smoothing irons may be heated in the oven,

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wrapped in flannel, and applied as hot as can be borne.

Poultice

A poultice is a soothing remedy of a moist mealy nature, applied to an inflammation. It is intended to furnish heat, but should always be tested against the cheek of the nurse before being applied to the child.

Flaxseed-Poultice

This is made of flaxseed-meal. The meal is first mixed with a little cold water and then stirred into boiling water until it is of the consistence of mush, after which it should be removed from the fire. A layer of this about an inch thick is spread on a piece of cheese-cloth, the edges folded over and secured.

Mustard-Poultice

One part of mustard is mixed with four or five parts of flaxseed- or wheat-flour. Boiled water is added until it is reduced to the consistence of mush. It is then spread on cloth and applied directly to the skin. If it burns too much a layer of linen can be

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placed between. It should be kept on until the skin is reddened but not long enough to blister.

When a poultice of very light weight is desired, bran or hops is used. A bran-poultice is made by sewing the bran in a muslin or flannel bag, then heating the whole in the oven or wringing it out of boiling water.

Bran- or Hop-
Poultice

An oiled silk jacket is sometimes ordered by the physician in cases of pneumonia. It should be shaped like a child's sleeveless shirt. A layer of cotton is placed between a layer of cheese-cloth and one of oiled silk. The edges are turned in and the three layers basted together. The shoulder-seams or straps may be sewed together or tied with tapes. The front is closed by means of tapes sewed on either side. The jacket is worn with the layer of cheese-cloth next to the skin.

Oiled Silk
Jacket

To give a simple enema, ordinary suds

Simple Enema

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are made with Castile or glycerin soap and warm water, temperature 100 degrees. A fountain-syringe to which a nozzle is attached should be used. Fill the bag with the amount of suds ordered (usually one or two pints) and anoint the nozzle with vaselin. Open the spring-clasp on the tube and allow the air and cold water to escape. Gently insert the nozzle into the rectum and allow the water to flow in a slow, steady stream. The bag should be held about two feet above the child's body. The child should be encouraged to retain the water as long as possible.

Camomile-Injection

A camomile-injection is given in the same manner as a simple enema. Camomile tea is used by steeping one tablespoonful of camomile-flowers in a quart of boiling water.

High Enema

When there is considerable constipation the enema will be more successful if given in the knee-chest position, that is with the

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patient resting on the knees and chest in bed, the head very low, and using a long flexible rubber tube on the end of the syringe, so that the tube can be inserted six or eight inches up into the bowels. This is called a high enema. It can also be given with the patient lying on the left side with knees drawn up.

Adding olive-oil and glycerin to a suds-enema will prove effective if the simple enema is not sufficient. An ounce of each is sufficient to add to a pint of water. Oil-Enema

Sometimes the physician orders an oil-enema to be given first and retained for an hour, followed by a simple soapsuds-enema. In that case four ounces of hot oil are injected and allowed to work slowly through the bowels before giving the simple enema.

In cases of acute diarrhea, starch-enema Starch-Enema is sometimes ordered. A starch-enema is made by mixing a dessertspoonful of starch

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with cold water into a paste and adding three ounces of boiling water. The water is then injected and the child encouraged to retain it as long as possible.

Stimulating Enema

Stimulating enemas are given in case of shock or collapse and should be very hot, as they will be more easily retained. The usual amount is one tablespoonful of whisky or brandy to four ounces of very hot water. Coffee is sometimes used instead of water, or it may be given alone. The enema must be given high to be retained.

Nutritive Enema

When the stomach is much disturbed during a severe illness so that food can not be digested, or after some operations on the mouth or throat, nutritive enemas are given to nourish the system. Various formulæ are used; one of the best is: peptonized milk, two ounces, one egg, and a pinch of salt. Beef-juice may also be given according to the physician's orders. When this is the

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only form of nourishment it must be given every four or five hours. A simple soap-suds enema is necessary once a day to wash out the lower bowel.

OINTMENTS AND LOTIONS

Good Mouth-Washes

To sweeten the mouth before breakfast:

Thymol	7½ grains
Alcohol	2 ounces
Borax	15 grains
Distilled water to make 1 pint.	

For pimples or soreness in the mouth:

Tincture of myrrh	½ dram
Sodium bicarbonate	½ dram
Chlorate of potassium	a pinch
Distilled water	6 ounces

Tooth-Powder

Powdered chalk	1 ounce
Oil of peppermint	1 drop

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Tooth-Paste

Powdered white Castile soap.	2½ ounces
Precipitated chalk	2⅛ ounces
Powdered orris-root	¾ ounce
Oil of peppermint	⅛ fluid dram

Add glycerin enough to make a paste.

Sunburn-Lotion

Glycerin	1 ounce
Spirits of camphor	¼ ounce
Boiled water	4 ounces
Rose-water	4 drops

Blackheads

Resorcin	60 grains
Zinc oxid	120 grains
Starch	120 grains
Petroleum	240 grains

Apply at night.

Pimples

Ichthyol	90 grains
Ether	2½ fluid drams
Alcohol	4 fluid drams

Dab on spots several times a day.

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Dusting Powder for Excessive Perspiration

Powdered calamine	2 drams
Florentine orris-root	1 ounce
Powdered starch	3 ounces

The parts should first be wiped with alcohol before applying the powder.

Bath-Lotion for Tired Muscles

Spirits of ammonia	2 ounces
Spirits of camphor	2 ounces
Sea-salt	1½ cups
Alcohol	2 cups

Put all the ingredients together in a quart bottle and fill it with hot water. Shake well before using.

Perspiration and Fetor of the Feet

Orris-powder	1 ounce
Zinc-oxid	1 ounce
Talcum powder	6 ounces

For Dandruff

Resorcin	8 grains
Castor-oil	1 fluid ounce
Alcohol	3 fluid ounces
Peru balsam	5 grains

Rub in the scalp daily.

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Dry Shampoo

Very fine white corn-meal 20 parts
Powdered orris-root 1 part

Sprinkle the powder through the hair. Massage the scalp, being sure to rub the powder over it. Shake the powder through the long hair, letting it stand for half an hour. Remove all the meal from the hair by means of a long-fibered brush.

Lotion for Freckles, No. 1

Compound tincture of benzoin 1 fluid dram
Glycerin $\frac{1}{2}$ fluid dram
Rose-water 3 fluid ounces

Lotion for Freckles, No. 2

Borax 1 dram
Dilute acetic acid $\frac{1}{2}$ fluid ounce
Rose-water $\frac{1}{2}$ fluid ounce

Apply night and morning.

Alum Lotion

Alum 6 drams
Water 8 fluid ounces
Alcohol 8 fluid ounces

To be used as a wash in excessive perspiration or if bed-sores are threatening.

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